

SAN DIEGO
COUNTY WATER AUTHORITY



TWENTY-EIGHTH ANNUAL REPORT
1974

SAN DIEGO COUNTY WATER AUTHORITY
Organized June 9, 1944

TWENTY-EIGHTH ANNUAL REPORT

OF AUTHORITY OPERATIONS

FOR FISCAL YEAR ENDING JUNE 30, 1974

Linden R. Buzell
General Manager and Chief Engineer

SAN DIEGO, CALIFORNIA
1974

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SAN DIEGO COUNTY WATER AUTHORITY

*Member Agencies, Date of Entry, and
Representative on Board of Directors on June 30, 1974*

CITIES

- Del Mar Nov. 23, 1962
Jack D. Shelver
- Escondido Oct. 9, 1950
Robert M. Dodd
- National City June 9, 1944
Cleo Osburn
- Oceanside June 9, 1944
David Rorick, Jr.
- San Diego June 9, 1944
Charles F. Cooper, John M. Cranston, Janet Erickson,
R. E. Graham, Gaylord Henry, Lawrence Hirsch, Henry
R. Hoyt, Jr., George Kerrigan, H. Fred Landgraf, Roy W.
Lessard, Judith McConnell

IRRIGATION DISTRICTS

- Helix June 9, 1944
John B. Gibson, Harry Griffen, Leland D. Pratt, M. J. Shelton
- San Dieguito Dec. 13, 1948
Frank J. Cermak
- Santa Fe Dec. 13, 1948
R. E. Badger
- South Bay Nov. 3, 1952
Lloyd L. Lee, John N. Williams
*(Includes City of Chula Vista, an independent member agency,
from June 9, 1944 to Nov. 3, 1952)*

MUNICIPAL WATER DISTRICTS

- Bueno Colorado June 11, 1954
Hans H. Doe
- Carlsbad June 16, 1954
Allan O. Kelly
- De Luz Heights June 28, 1967
George Yackey
- Olivenhain July 25, 1960
Howard G. Golem
- Otay Oct. 26, 1956
Glenn M. Reiter
- Poway April 21, 1954
David R. Shephardson
- Rainbow April 10, 1954
Robert Ingold
- Ramona August 27, 1957
John E. Langan
- Rincon del Diablo June 14, 1954
Charles A. Crytser
- Rio San Diego June 7, 1956
Charles C. Price
*(Includes Lakeside I.D., an independent member agency,
from June 9, 1944 to June 7, 1956)*
- Valley Center May 9, 1955
Hadley Johnson
- Yulma Dec. 16, 1963
F. D. Fitzsimmons

PUBLIC UTILITY DISTRICT

- Fallbrook June 9, 1944
Ralph A. Brown

**OFFICERS OF
BOARD OF DIRECTORS**



Chairman
R. E. BADGER
*Santa Fe
Irrigation District*
9-57 to 6-74



Vice Chairman
HANS H. DOE
*Bueno Colorado
Municipal Water District*
6-54 to 6-74



Secretary
LLOYD L. LEE
*South Bay
Irrigation District*
4-61 to 6-74



Treasurer
HARRY GRIFFEN
*Helix
Water District*
7-56 to 6-74



Controller
HOWARD G. GOLEM
*Olivenhain Municipal
Water District*
1-62 to 6-74

**EXECUTIVE
OFFICERS**



LINDEN R. BURZELL
*General Manager and
Chief Engineer*



PAUL D. ENGSTRAND
General Counsel

ADMINISTRATIVE STAFF



B. L. OGDEN
*Assistant Chief
Engineer*



HENRY LOZANO
*Director of
Finance*



I. E. NICHOLS
Superintendent



JANET RAVIART
Executive Secretary

BOARD OF DIRECTORS

1973-74

For Officers, See Page 5



RALPH A. BROWN
Fallbrook Public
Utility District
7-67 to 6-74



FRANK J. CERMAK
San Diego
Irrigation District
7-66 to 6-74



CHARLES F. COOPER
San Diego
4-73 to 6-74



JOHN M. CRANSTON
San Diego
10-64 to 6-74



CHARLES A. CRYTSEK
Rincon del Diablo
Municipal Water District
6-54 to 6-74



ROBERT M. DODD
Escondido
1-70 to 6-74



JANET ERICKSON
San Diego
2-74 to 6-74



F.D. FITZSIMMONS
Yuma Municipal
Water District
8-71 to 6-74



JOHN B. GIBSON
Helix
Water District
10-71 to 6-74



R. E. GRAHAM
San Diego
7-63 to 6-74



GAYLORD L. HENNY
San Diego
11-64 to 6-74



LAWRENCE HIRSCH
San Diego
5-73 to 6-74



HENRY R. HOYT, JR.
San Diego
4-73 to 6-74



ROBERT INGOLD
Rainbow Municipal
Water District
10-72 to 6-74



HADLEY JOHNSON
Valley Center
Municipal Water District
1-72 to 6-74



EDITH KAMM
San Diego
8-65 to 2-74

BOARD OF DIRECTORS

1973-74

(Continued)



ALLAN O. KELLY
Carlsbad Municipal
Water District
11-63 to 6-74



GEORGE KERRIGAN
San Diego
9-53 to 6-74



H. FRED LANDGRAF
San Diego
10-55 to 6-74



JOHN E. LANGAN
Ramona Municipal
Water District
4-61 to 6-74



ROY W. LESSARD
San Diego
5-73 to 6-74



JUDITH McCONNELL
San Diego
4-73 to 6-74



CLEO OSBURN
National City
3-70 to 6-74



LELAND D. PRATT
Helix
Water District
11-69 to 6-74



CHARLES C. PRICE
Rio San Diego
Municipal Water District
7-58 to 6-74



GLENN M. REITER
Otay Municipal
Water District
9-71 to 6-74



DAVID RORICK, JR.
Oceanside
8-73 to 6-74



M. J. SHELTON
Helix Water District
2-48 to 6-56
10-65 to 6-74



JACK D. SHELVER
Del Mar
12-69 to 6-74



DAVID R. SHEPARDSON
Poway Municipal
Water District
4-54 to 6-74



JOHN N. WILLIAMS
South Bay
11-70 to 6-74



GEORGE YACKEY
De Luz Heights
Municipal Water District
6-68 to 6-74

COMMITTEES OF THE BOARD
June 30, 1974

ADMINISTRATIVE CODE COMMITTEE

Charles C. Price, Chairman
George F. Yackey, Vice Chairman
Ralph A. Brown
Hans H. Doe
Ralph E. Graham
Harry Griffen
Lloyd L. Lee

ENGINEERING & OPERATIONS
COMMITTEE

M. J. Shelton, Chairman
Leland D. Pratt, Vice Chairman
Ralph A. Brown
Frank J. Cermak
Charles F. Cooper
Charles A. Crytser
Robert M. Dodd
Hans H. Doe
Ralph E. Graham
Harry Griffen
Lawrence Hirsch
Hadley Johnson
Allan O. Kelly
Lloyd L. Lee
Charles C. Price
Glenn M. Reiter
George F. Yackey

FINANCE & INSURANCE COMMITTEE

John M. Cranston, Chairman
Howard G. Golem, Vice Chairman
Janet Erickson
John B. Gibson
Ralph E. Graham
Harry Griffen
Gaylord L. Henry
Lawrence Hirsch
Henry R. Hoyt, Jr.
Robert Ingold
George Kerrigan
Roy W. Lessard
Charles C. Price
David Rorick, Jr.
M. J. Shelton
John N. Williams

LEGAL AND CLAIMS COMMITTEE

Gaylord L. Henry, Chairman
George Kerrigan, Vice Chairman
John M. Cranston
H. Fred Landgraf
Judith McConnell
David R. Shepardson

LAND AND RIGHTS OF WAY COM.

Lloyd L. Lee, Chairman
Robert M. Dodd, Vice Chairman
Ralph A. Brown
F. D. Fitzsimmons
John B. Gibson
Gaylord L. Henry
Judith McConnell
M. J. Shelton
David R. Shepardson

ORGANIZATION & PERSONNEL
COMMITTEE

David R. Shepardson, Chairman
Charles C. Price, Vice Chairman
Frank J. Cermak
Howard G. Golem
Henry R. Hoyt, Jr.
H. Fred Landgraf
John E. Langan
Cleo Osburn
John N. Williams
George F. Yackey

PUBLIC EDUCATION & INFORMATION
COMMITTEE

Harry Griffen, Chairman
Lloyd L. Lee, Vice Chairman
Hans H. Doe
F. D. Fitzsimmons
R. E. Graham
Robert Ingold
Allan O. Kelly
Roy W. Lessard
Leland D. Pratt
Glenn M. Reiter

WATER PROBLEMS & POLICY
COMMITTEE

Hans H. Doe, Chairman
John M. Cranston, Vice Chairman
Ralph A. Brown
Charles F. Cooper
Charles A. Crytser
Janet Erickson
Ralph E. Graham
Harry Griffen
Lawrence Hirsch
Henry R. Hoyt, Jr.
Hadley Johnson
John E. Langan
Lloyd L. Lee
Judith McConnell
Cleo Osburn
Leland D. Pratt
Glenn M. Reiter
David Rorick, Jr.
M. J. Shelton

STATISTICAL SUMMARY

	1973-74	1972-73	Percent Change
GROWTH OF AREA			
Number of Agencies	22	22	0
Total Area - Acres	762,196	760,762	+0.2
Population	1,507,300	1,459,500	+3.3
Assessed Valuation	\$4,114,380,482	\$3,634,092,751	+13.2
OPERATIONS			
Water Imported by Authority-cc. ft.	337,880	342,251	-1.3
Water Production of Agencies-cc. ft.	390,502	342,319	+14.1
Local Water Used-cc. ft.	43,997	33,088	+15.5
Authority Water Used-cc. ft.	346,305	304,231	+13.9
Miles of Pipe Line	204	199	+2.5
Miles of Patrol Roads Maintained	100	100	0
Number of Service Connections	57	56	+1.8
FINANCIAL			
Revenues:			
Water Revenue	\$ 16,281,533	\$ 16,180,921	+0.6
Other Revenue	810,384	816,554	-0.8
Taxes	4,513,103	3,976,188	+13.5
Expenditures:			
Operation and Maintenance	\$ 679,495	\$ 534,149	+17.9
Purchase of Water	15,713,900	15,527,992	+1.2
Payments on Outstanding Debt	2,149,029	2,069,030	+3.9
Total Investment in Plant:			
Total Fixed Assets	\$ 182,191,013	\$ 177,487,566	+2.7
Long-Term Debt	79,345,869	82,123,536	-3.4



LAKE SKINNER
View Looking Northerly Towards Hemet, Ca.

San Diego County Water Authority

2750 Fourth Avenue, San Diego, California 92103 (714) 297-3218

Hans H. Doe, Chairman
Lloyd L. Lee, Vice Chairman
John M. Crandon, Secretary
Linden R. Buzzell, General Manager
and Chief Engineer
Paul D. Engstrand, General Counsel

December 6, 1974

Board of Directors San Diego County Water Authority

The Twenty-Eighth Annual Report of the Authority covering activities during the fiscal year ending June 30, 1974, has been prepared and is transmitted herewith.

Planning and studies for treated water distribution were continued throughout the fiscal year. A comprehensive report describing the alternative projects studied was completed in April 1974. The Environmental Impact Report covering the facilities required by 1980 was completed in draft form shortly after the end of the fiscal year. An agreement for supplying treated water to the Authority from the City of San Diego treatment plants was drafted and reviewed by both agencies. It is anticipated that this agreement will serve as a model for other Authority agreements with member agencies to obtain additional quantities of treated water.

The scheduled completion date for all Authority facilities required before commencing treated water distribution is March 1976. At that time Metropolitan Water District's Robert A. Skinner Treatment Plant will be in service.

The Authority's financial position remains strong; net revenues exceeded expenses by \$409,417 in the General Fund. The cost of the proposed facilities for treated water distribution will be paid for from a combination of the balance of the 1966 Waterworks Improvement Fund, current taxation, and other revenues.

Very truly yours,

L. R. Buzzell
General Manager and Chief Engineer

LRB:jmr

Member Agencies

CITIES: Del Mar, Escondido, National City, Oceanside, San Diego • IRRIGATION DISTRICTS: Helix, San Diego, Santa Fe, South Bay
PUBLIC UTILITY DISTRICTS: Fallbrook • MUNICIPAL WATER DISTRICTS: Buena Colorado, Carlsbad, De Luz Heights, Olivenhain, Otay, Poway,
Ramona, Ramona, Rincon Del Diablo, Rio San Diego, Valley Center, Yuma

FISCAL YEAR 1973-1974

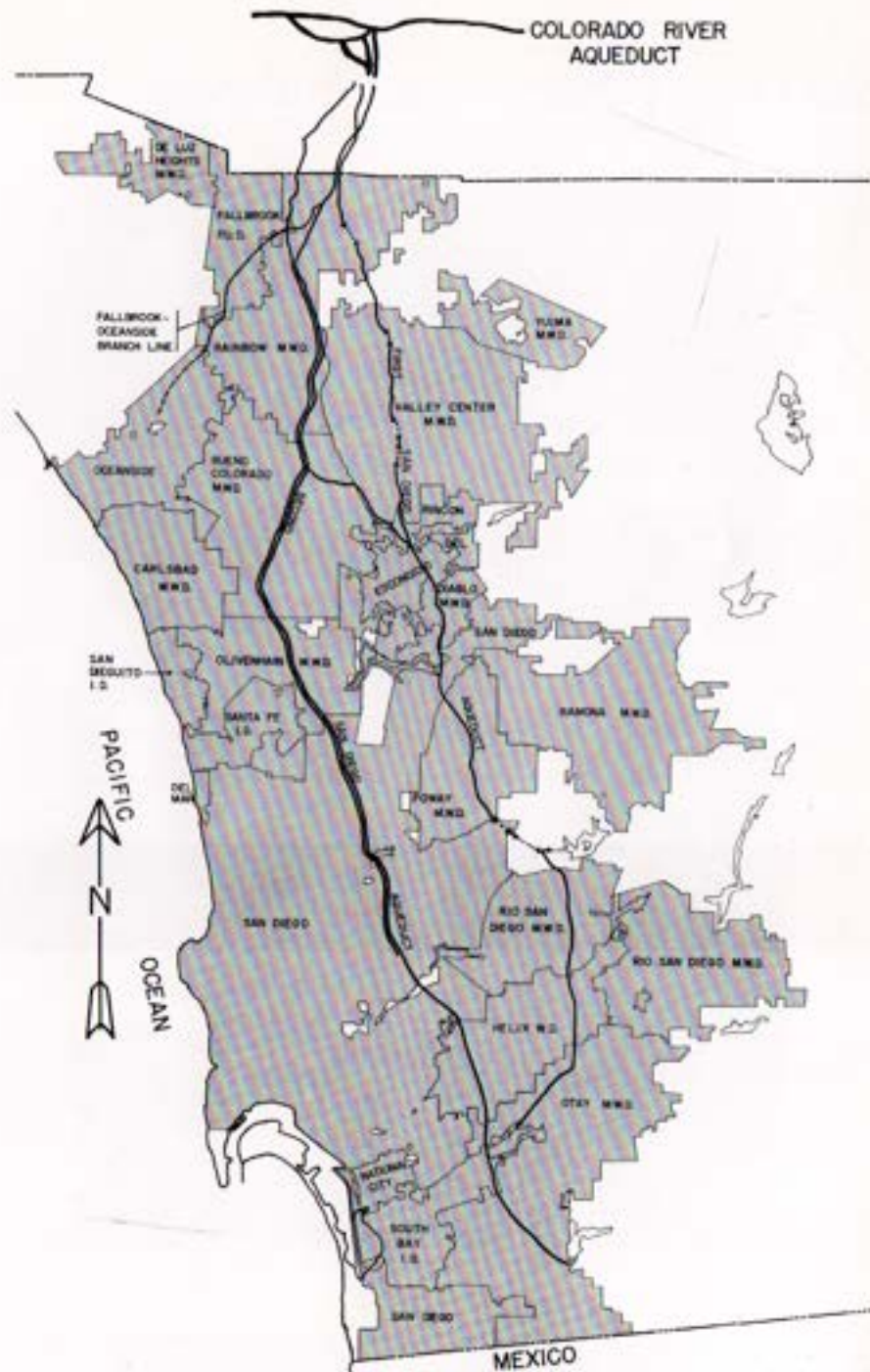


Figure A. Authority Area Within San Diego County.

The San Diego County Water Authority was organized in 1944 under the County Water Authority Act, which had been passed by the State Legislature in 1943. The purpose of the Authority is to provide imported water for municipal, domestic and other beneficial uses to its member agencies throughout the county. At present, nearly 90 percent of all water used in the County is supplied by the Authority from the Colorado River Aqueduct, which is owned and operated by the Metropolitan Water District of Southern California. MWD is also the distributor to its member agencies of water from the State Water Project. After purchasing water from MWD, the Authority, in turn, wholesales the water to its member agencies.

The Authority is a public corporation with the right to sue or be sued and to acquire, hold or dispose of real and personal property. Its powers, privileges and duties are exercised through a Board of Directors. As with a municipal corporation, it can exercise power of eminent domain and is empowered to construct and maintain works and facilities across or along public lands. It may borrow money and incur indebtedness up to a maximum of 15 percent of taxable property in its area. It may levy and collect taxes, enter into contracts, employ personnel and establish offices, and may join other public corporations for the purpose of carrying out its powers.

BOARD OF DIRECTORS

General

The policies of the San Diego County Water Authority are set by its Board of Directors. At present, the Board has 36 Directors. Each Director is appointed by the chief executive officer of the agency represented and is approved by the governing body of that agency. The Authority has 22 member agencies. Each member agency is entitled to one representative, and an additional representative for each additional five percent of total Authority assessed valuation contained within the member agency's boundary. At the end of the report year, three agencies were represented by more than one director: City of San Diego by eleven, Helix Water District by four, and South Bay Irrigation District by two.

Officers of the Board of Directors are elected in July of even-numbered years. In July 1972, Fred A. Heilbron, who had served as chairman of the Water Authority since its formation, was reelected. Raymond E. Badger was reelected Vice Chairman, and Hans H. Doe was reelected Secretary. Harry Griffen continued to serve as Treasurer and Howard G. Golem as Controller. The latter two offices are filled by appointment.

Following Mr. Heilbron's death on February 14, 1973, Vice Chairman Badger was elected Chairman at the March Board meeting to serve the unexpired term. Secretary Doe was elected Vice Chairman, and Lloyd L. Lee was elected Secretary.

Because of the size of the Board, most matters are considered first by one or more of eight standing committees. Results of committee deliberations and recommendations for action are reported to the full Board, which may then act as it sees fit. The standing committees are Finance and Insurance, Engineering and Operations, Organization and Personnel, Water Problems

and Policy, Lands and Rights of Way, Legal and Claims, Public Education and Information, and Administrative Code, Membership of committees as of June 30, 1974 is listed on page 8 of this report.

During the July 1973 Board meeting, Chairman Badger awarded 20-year service emblems to Directors George Kerrigan and Robert A. Weese; a 15-year emblem to Director Charles C. Price; 10-year emblems to Directors R. E. Graham and Allan O. Kelly; and three-year emblems to Directors Robert M. Dodd, Cleo Osburn and Leland D. Pratt.

Also at the July Board meeting, Chairman Badger was appointed as one of the Water Authority's representatives on the Metropolitan Water District Board of Directors, replacing the late Fred A. Heilbron.

David Rorick, Jr., was seated as the representative of the City of Oceanside on August 16. He replaced Robert A. Weese, and his term will expire July 15, 1974.

George F. Yackey, who was first seated as the representative of De Luz Heights Municipal Water District on June 13, 1968, was reelected on September 13, 1973. His term will expire July 19, 1979.

Because of the increase in assessed valuation within the Authority for the 1973-74 fiscal year, the Authority became eligible for increased representation on the Metropolitan Water District Board. Accordingly, during the October 11, 1973, meeting of the Water Authority Board, Secretary Lloyd L. Lee was appointed as a representative to MWD by Chairman Badger.

Janet Erickson was seated as a representative of the City of San Diego on February 14, 1974, replacing Edith Kamm. Her term will expire January 28, 1980.

A Task Force Committee on Filtration Plans was appointed by Chairman Badger on May 9, 1974. Charged with the responsibility to expedite acceptance of specific proposals, the Committee consisted of Directors Lee (Chairman), Doe, Graham, Griffen, Lessard, Reiter and Shelton. Ernest Clay of the City of San Diego Utility Department was designated alternate for Director Graham, and Director Pratt was designated alternate for Director Shelton.

On June 13, 1974, George Kerrigan, who was first seated as a representative of the City of San Diego in September 1953, was reelected; as was Charles C. Price, who was first seated as the representative of Rio San Diego Municipal Water District in July 1958. Director Kerrigan's term expires March 7, 1980, and Director Price's term will expire June 7, 1980.

A resolution providing for establishment of an ad hoc nominating committee to assist in selection of Board officers was approved March 14. On June 13, Chairman Badger appointed Directors Price (Chairman), Lessard, Shephardson, Dodd, and Williams to the Committee in preparation for the election of officers at the July meeting.

Policies

During the year covered by this report, many important policy decisions were reached by the Board. Some of the more noteworthy were:

A resolution supporting Federal legislation to reduce salinity on the Colorado River was approved by the Board on July 12, 1973. This resolution urged Congress to approve a bill providing works to control entry of salts into the river at several up-stream points, as well as to provide for desalination of waters entering Mexico.

A five-year extension of the agreement with the City of San Diego for storage of water in San Vicente Reservoir was approved by the Board on December 13, 1973.

An amendment to the Water Authority guidelines for compliance with the California Environmental Quality Act was approved February 14. The change was necessary to conform with changes in the law.

The Board on March 14 adopted local guidelines for compliance with the California Governmental Conflicts of Interests Act.

Proposition W, a proposal to permit Metropolitan Water District to issue revenue bonds, was endorsed and approved by the Authority Board on March 14, 1974. The proposition appeared on the ballot June 4, 1973, and was approved by the voters.

A policy statement, assuring equity to all member agencies in any water treatment plan approved by the Authority, was developed in a resolution passed by the Board on April 11.

During the June meeting, the Board authorized the execution of a joint agreement revising terms of the contract with Mexico concerning the transportation of water to Tijuana. The revision provides that Mexico will supply the power required on the Colorado River Aqueduct to pump the water for Tijuana.

Other Action

A resolution honoring William R. Gianelli for the work he had done in bringing the first phase of the State Water Project to successful completion was approved by the Board August 16, 1973. The resolution was occasioned by Mr. Gianelli's announcement he was leaving the position of Director of Water Resources.

Robert A. Weese, who had represented the City of Oceanside on the Water Authority Board since 1953, was honored for his many contributions to water development by a resolution passed on September 13, 1973.

Also honored by a resolution passed during the September Board meeting was Allen H. Jones, who retired from the Authority on September 30, after having served 21 years as Assistant Chief Engineer.

William H. Jennings, first Secretary of the Authority, its General Counsel for many years and now designated its General Counsel Emeritus, was honored by resolution approved by the Board on December 13 and presented at a dinner meeting with the California Water Commission on January 3. The resolution was prompted by Mr. Jennings' announcement of his retirement from the Commission.

Edith Kamm, the first woman to have served as a member of the Water Authority Board of Directors, was honored by a resolution approved April 11. Mrs. Kamm, who had been a representative of the City of San Diego since 1965, resigned following the expiration of her term.

Fred C. Stalder, who served as Chairman of Citizens for Proposition W, and Gerald G. O'Brien who was the organization's Treasurer, were honored by resolutions approved June 13 for their outstanding contributions to the successful educational program conducted on behalf of the Metropolitan Water District's revenue bond proposal.

Administration

The Executive Officers of the Water Authority are Linden R. Burzell, General Manager and Chief Engineer; Paul D. Engstrand, General Counsel; and William H. Jennings, General Counsel Emeritus. The Administrative Staff consists of Assistant Chief Engineer, which position was held by Allen H. Jones until his retirement September 30, subsequently by Buckley L. Ogden; Director of Finance, Henry G. Lozano; Superintendent, Irwin E. Nichols; and Executive Secretary, a position held by Annette L. Winner until August 16, and subsequently by Janet M. Raviart.

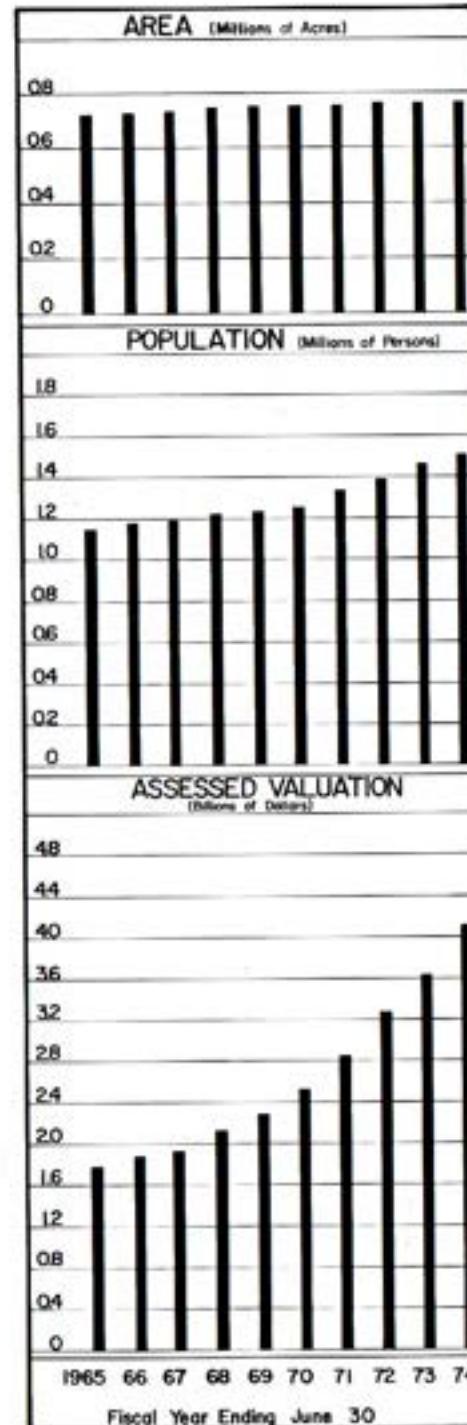
Administrative offices of the Authority are at 2750 Fourth Avenue, San Diego. Field headquarters are in the Fred A. Heilbron Operations Center at Fifth and Quince streets, Escondido.

At the close of the fiscal year, the Authority had a staff of 37, including one temporary employee. This was five less than the total number of employees at the end of fiscal 1972-73. Of those employed at the end of the report year, 10 were engaged in administration, engineering, and financial operations; and 19 in maintenance, stenographic and clerical positions. Another eight serve in new project engineering design, surveying and inspection.

WATER AUTHORITY COMPOSITION

Area

The area within the Authority increased during the fiscal year from 760,762 acres (1,188.7 square miles) to 761,482 acres (1,189.8 square miles), a net gain of 720 acres. Annexations which changed the Authority boundaries were the Golf Course Annexation to the City of Oceanside in August 1973, consisting of 482 acres; Rainbow Municipal Water District's Concurrent Annexation Number 5 in November, consisting of 56 acres; Valley Center Municipal Water District's Concurrent Annexation Number 4 in November, consisting of 12 acres; and the City of Oceanside's San Luis Rey Number 10 Annexation in February, consisting of 171 acres.



Ninety-six percent of San Diego County's population lives within the Water Authority, which encompasses 28 percent of the total county area.

Boundaries of Authority member agencies overlap in some areas, but efforts are being made to encourage agencies to eliminate such overlaps by appropriate action. Most overlapping has occurred when incorporated cities have annexed neighboring areas already within another member agency.

Area changes and percentage of area of each agency are shown in Table 1. Largest area is within the City of San Diego, which encompasses 26.6 percent of the Authority's total area; smallest area is the City of Del Mar with 1,082 acres.

The Statement of Changes of Boundaries, which by State law, must be filed by the Executive Secretary prior to January 1 each year, was filed with the Metropolitan Water District, the San Diego County Assessor, and the State Board of Equalization. The 1973 statement showed 25 changes of boundaries by member agencies, of which five changed Authority boundaries. This statement is used by the County Assessor to determine total assessed valuation within the Authority and is the basis on which the Board levies taxes each August.

Population

The area served by the Authority continues to be one of the fastest-growing regions in the United States. An estimate of population at the close of fiscal 1973-74 places the number at 1,507,300. Population growth within the Authority is shown in Table 2. Population figures within the member agencies are shown in Table 3.

The City of San Diego, which has the largest area, also contains the largest population of any Authority member, with 777,300 persons, or 52 percent of the total. De Luz Heights Municipal Water District has the smallest population with 150 persons. It also has the lowest density with eight persons to the square mile. Highest average population density exists in the City of La Mesa, part of Helix Water District, with 8.84 persons per acre.

Average population density of the entire Authority area is now 1.98 per acre, or 1,265 persons per square mile.

Assessed Valuation

The assessed valuation of all taxable property within the Authority, both secured and unsecured, is determined by the San Diego County Assessor. The assessed valuation he reports and the Authority's budgetary requirements provide the basis for determination of the tax rate by the Board.

The assessed valuation within each member agency determines the number of directors and the total number of votes to which the agency is entitled. The County Auditor certified to the Authority the assessed valuation of taxable property for the 1973-74 tax levy was \$4,114,380,482, an increase of \$480,287,731, or 13.2 percent over 1972-73. Assessed valuation for 1974-75 was received from the County Auditor before completion of this report. It shows taxable property within the Authority has been assessed at \$4,775,761,282, an increase of \$661,380,800 or 16 percent. The average assessed valuation of property within the Authority has increased from \$5,408 per acre in 1973-74 to \$6,266 per acre in 1974-75. The assessed valuation within each member agency, the total for the Authority and the total for San Diego County are shown in Table 4.

WATER SUPPLY AND CONSUMPTION**Source**

At present, the entire water supply of the San Diego County Water Authority comes from the Colorado River through facilities of the Metropolitan Water District of Southern California (MWD). As the result of taxes and annexation charges paid to MWD, the Authority has a preferential right to 8.9 percent of Metropolitan's total supply. (Water purchases earn no preferential rights.) Preferential right has never been invoked by MWD as the basis for deliveries.

MWD Facilities

MWD diverts water from the Colorado River Aqueduct into the San Diego Aqueducts near San Jacinto. The Authority accepts delivery at a point approxi-

mately six miles south of the San Diego-Riverside county line. San Jacinto Reservoir provided approximately 900 acre feet (af) of storage near the northern end of the first two pipelines until October 24, 1973. Condemnation by the Department of Water Resources, Division of Safety of Dams, required abandonment of this facility. After the closing of San Jacinto Reservoir, Pipeline No. 1 received water directly from the San Diego Canal at the Aqueduct-canal crossing near Winchester. Pipeline No. 2 was supplied with water from Pipeline No. 3 at Rainbow Pass.

First water was delivered into Lake Skinner, near Rancho California, in April 1973. In January 1974, Lake Skinner was filled to its capacity of 44,000 acre feet at elevation 1,479. This storage serves only the Third and Fourth Pipelines. The San Diego Canal, with a capacity of 1,000 cubic feet per second (cfs), delivers Colorado River water to Lake Skinner. This canal will also serve as a portion of the transmission system from Perris Lake, terminal reservoir of the California Aqueduct, to Lake Skinner when northern water is introduced into the San Diego Aqueduct system. This is expected to occur about June 1976.

Authority Facilities

The Authority takes delivery of water from MWD in the four pipelines of the two San Diego Aqueducts at a point approximately six miles south of the Riverside-San Diego county line, near Rainbow. The First Aqueduct terminates in San Vicente Reservoir, which is owned and operated by the City of San Diego. The Fallbrook-Oceanside Branch connects to the First Aqueduct at Rainbow. The Authority operates and maintains the section of this Branch from Rainbow to Morro Reservoir, which is approximately 12.5 miles in length. The La Mesa-Sweetwater Branch extends from the First Aqueduct at Slaughterhouse Canyon through Lakeside, El Cajon and La Mesa to its terminus at Sweetwater Reservoir. The two pipelines of the First San Diego Aqueduct share common tunnels and inverted siphons, and are operated as a unit. The two pipelines of the Second Aqueduct, Pipelines 3 and 4, although in a common right of way for most of their length, do not share any facilities in San Diego County, and are operated separately. Pipeline 3 terminates in Lower Otay Reservoir. Pipeline 4 ends at Miramar Reservoir. An extension of Pipeline 4, the Pomerado Pipeline, extends the Authority system to the Tierrasanta section of the City of San Diego. A crossover carries water from the Second Aqueduct at Twin Oaks Valley to the First Aqueduct north of Escondido.

The Water Authority operates a chlorination station at Rainbow Pass just north of the Riverside-San Diego county line. Flows in the First Aqueduct and in Pipeline 3 are treated at this point. A temporary chlorination station is located at Auld Valley, near Lake Skinner, to provide chlorination to the water in Pipeline 4.

The First San Diego Aqueduct (Pipelines 1 and 2) has a capacity of 196 cfs. Pipeline 3 has a nominal capacity of 250 cfs. Pipeline 4 has a capacity of 380 cfs.

The Authority does not own or operate any storage facilities. It does, however, have a contractual right to store up to 40,000 af in San Vicente Reservoir. This is the result of an agreement with the City of San Diego which was renewed December 13, 1973. Under this agreement, the City is paid \$2.20

per acre foot for the maximum amount of water in storage each year plus \$.50 per acre foot to cover pumping costs for water transferred from storage to the City. The agreement further provides that the first of any water which might be lost over the spillway would be that stored by the Authority. During the fiscal year, a total of 15,596 af was placed in San Vicente Reservoir by the Authority for the account of its member agencies. A total of 14,713 af was withdrawn, and 949 af was lost by evaporation. The net result of this year's activities was a decrease of 66 af from 20,404 af in storage on June 30, 1973, to 20,338 af in storage on June 30, 1974. San Vicente storage statistics are shown in Table 11. Rainbow MWD had the largest amount credited to its account at year's end, totaling 4,443 af, or more than 22 percent of all Authority water stored in San Vicente.

Another Authority-City of San Diego agreement permits the storage of up to 2,500 af in the City's Lower Otay Reservoir, terminus of Pipeline 3. Storage here is for operational purposes only. Water is transferred to the City when it requests water at this location. No storage for member agencies is provided. The City is paid \$1.00 per af for the maximum amount of storage in any 12-month period of fraction thereof. A minimum annual fee of \$1,000 is paid to the City. The Authority also pays pumping charges, which vary from \$1.50 to \$2.25 per acre foot depending on the elevation of water in the reservoir. The City prefers to have water delivered directly to its Lower Otay treatment plant at the rate required rather than into the reservoir. Close control is exercised by the Authority personnel to prevent spillage.

The Authority also has the right to store up to 3,000 af in Lake Poway under similar terms with the exception that no evaporation is charged for Authority-stored water.

Telemetry and supervisory control of the San Diego Aqueduct system is maintained from the Fred A. Heilbron Operations Center, Escondido. Rates of flow from MWD and service to member agencies are monitored from this facility. Communications with Metropolitan's East Valley Operations Section unit at Lake Skinner is maintained by two-way radio.

Deliveries and Rates

The four pipelines of the San Diego Aqueducts delivered a total of 337,880 af during the fiscal year, as compared to 342,251 af delivered during the previous year. This was the second successive year in which total water deliveries were reduced.

Lowest rates of flow occurred in December 1973. From December 3 to 7, the First Aqueduct was taken out of service to permit internal inspection by representatives from the Bureau of Reclamation and the Authority staff. On December 16, MWD shut down Pipelines 3 and 4 to permit removal of a bulkhead in the main Skinner Filtration Plant influent line. Pipeline 4 was placed back in service on December 19. Pipeline 3 remained shut down until December 22 to permit a connection at the realignment at Highway 94 and Spring Street in La Mesa. Low flow in the San Diego Aqueducts during this period was 10 cfs. Low monthly average flow in the Aqueducts of 240 cfs occurred during January 1974. Total deliveries from the Aqueducts during that month were 14,780 af, up 1,589 af from the previous fiscal year's low month (December 1972).

June brought the year's highest peak rates of flow and the highest monthly total for water delivered from the Aqueducts. Although total deliveries for the fiscal year were down, the July average flow established a new record for the Authority at 661 cfs. This was 39 cfs greater than the previous reported high of August 1972. The July total delivery was 40,623 af compared to 38,214 af in August 1972.

Water deliveries to member agencies are shown in Table 5. The agencies purchased 328,776 af during the year, 11,788 af less than during the 1972-73 fiscal year. Although 15,683 af was placed in storage by the Authority, up 2,183 af over the previous year, a nearly equal amount (15,561 af) was withdrawn.

Total quantities of water delivered to individual member agencies for the eight-year period 1966 to 1974 are shown in Table 6. Also shown are the total quantities of water delivered since 1947. Sales during the fiscal year covered by this report show a 3.4 percent decrease from 1972-73.

Operation and maintenance of Authority facilities is financed from a surcharge added to the MWD water price, plus other miscellaneous revenues. During 1973-74, this surcharge was \$1.25 per acre foot. From 1947 to August 1964, the surcharge was \$2.00 per acre foot; since September 1964, it has been \$1.25.

Capital outlay requirements have traditionally been financed by general obligation bonds, and tax revenues have been applied to bond service. The tax rate during fiscal 1973-74 was 14¢ per \$100 assessed valuation.

The Metropolitan Water District announces its water rates approximately two years in advance. During recent years, MWD has increased its water rates each year, and further annual increases are scheduled. During the 1973-74 fiscal year, the MWD rate for unfiltered municipal and industrial water was \$56.00 per acre foot. Addition of the Water Authority surcharge brought the total rate to Authority member agencies to \$57.25. When State Project water is introduced into the Authority system, expected in June 1976, two MWD surcharges will be added to the basic price. A surcharge of \$12 per acre foot will be added for northern water, and a surcharge estimated at \$9 per acre foot will be added for treatment. A summary of past and announced MWD and Authority rates follows:

SUMMARY OF WATER RATES
(Dollars Per Acre Foot)

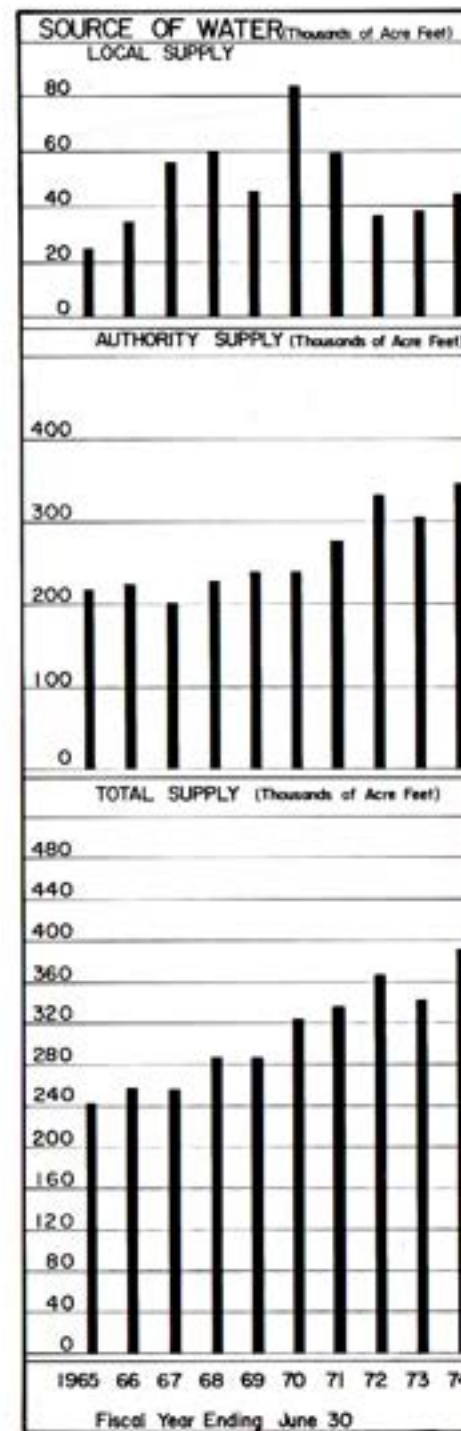
From	To	MWD	Authority	Total	Agricultural Rebate	Resulting Agricultural Rate
7/1/58	1/1/61	15.00	2.00	17.00	3.00	14.00
1/1/61	1/1/62	17.00	2.00	19.00	4.25	14.75
1/1/62	1/1/63	19.00	2.00	21.00	5.50	15.50
1/1/63	1/1/64	21.00	2.00	23.00	6.75	16.25
1/1/64	7/1/64	24.00	2.00	26.00	9.00	17.00
7/1/64	9/1/64	25.00	2.00	27.00	9.75	17.25
9/1/64	7/1/65	25.00	1.25	26.25	9.75	16.50
7/1/65	7/1/66	28.00	1.25	29.25	12.00	17.25
7/1/66	7/1/67	31.00	1.25	32.25	14.00	18.25
7/1/67	7/1/68	34.00	1.25	35.25	16.00	19.25
7/1/68	7/1/69	37.00	1.25	38.25	18.00	20.25
7/1/69	7/1/70	40.00	1.25	41.25	20.00	21.25
7/1/70	7/1/71	44.00	1.25	45.25	23.00	22.25
7/1/71	7/1/72	48.00	1.25	49.25	26.00	23.25
7/1/72	8/13/73	52.00	1.25	53.25	28.50	24.75
8/13/73	7/1/75	56.00	1.25 ^o	57.25 ^o	31.00	26.25 ^o
7/1/75	7/1/76	57.00	1.25 ^o	58.25 ^o	32.00	26.25 ^o

^oSubject to change

As shown in the water rate summary, agricultural water users benefit by a rebate from MWD. To obtain the rebate, the Authority certifies to MWD the quantities of water so used. Rebates granted the Authority are paid in full to the agencies, which, in turn, credit the rebates to the agricultural users.

Water Production of Member Agencies

"Water Production" is the phrase used to mean the quantity of water which an agency must produce from all its sources to meet the demands of its consumers, plus the losses which occur between the source of supply and the consumers. These losses include leakage, losses from breaks, evaporation from distribution reservoirs, and waste resulting from normal operations. Sources of supply may include impounding reservoirs, wells, and the Authority system.



Total water production of the 22 member agencies is shown in Table 7. Total water production increased from 342,319 af in 1972-73 to 390,502 af in 1973-74, a 14 percent increase. Highest monthly production during the report year occurred in August 1973 when 45,091 af was used. This was 1,815 af less than the August 1972 production, which remains the record high water production month. Smallest monthly production during the year was in January 1974, with 17,690 af. This was 24 percent more than production in February 1973, the low month for the previous fiscal year.

Rain and runoff were below normal this year, being 68 percent of normal at Lindbergh Field, 59 percent at Lake Cuyamaca, and 62 percent at Lake Henshaw. Local sources yielded 44,000 af, or 11 percent of total use. Most of this water had been placed in storage during the heavy runoff the previous year.

The wells in Pauma Valley produced 1,700 af for the several agencies within Yuima Municipal Water District. The San Luis Rey River system and the Warner Ranch wells owned by the Vista Irrigation District, a sub-agency of Buena Colorado MWD, produced 12,580 af for distribution within Buena Colorado and the City of Escondido. California American Water Company produced approximately 4,500 af of local water within its service area, which includes National City and South Bay I.D. Helix Water District used 7,607 af of local water including 297 af from wells in the El Monte Basin. The most extensive reservoir system within the Water Authority is that of the City of San Diego. This system produced 17,280 af of local

SAN DIEGO COUNTY WATER AUTHORITY WATER PRODUCTION

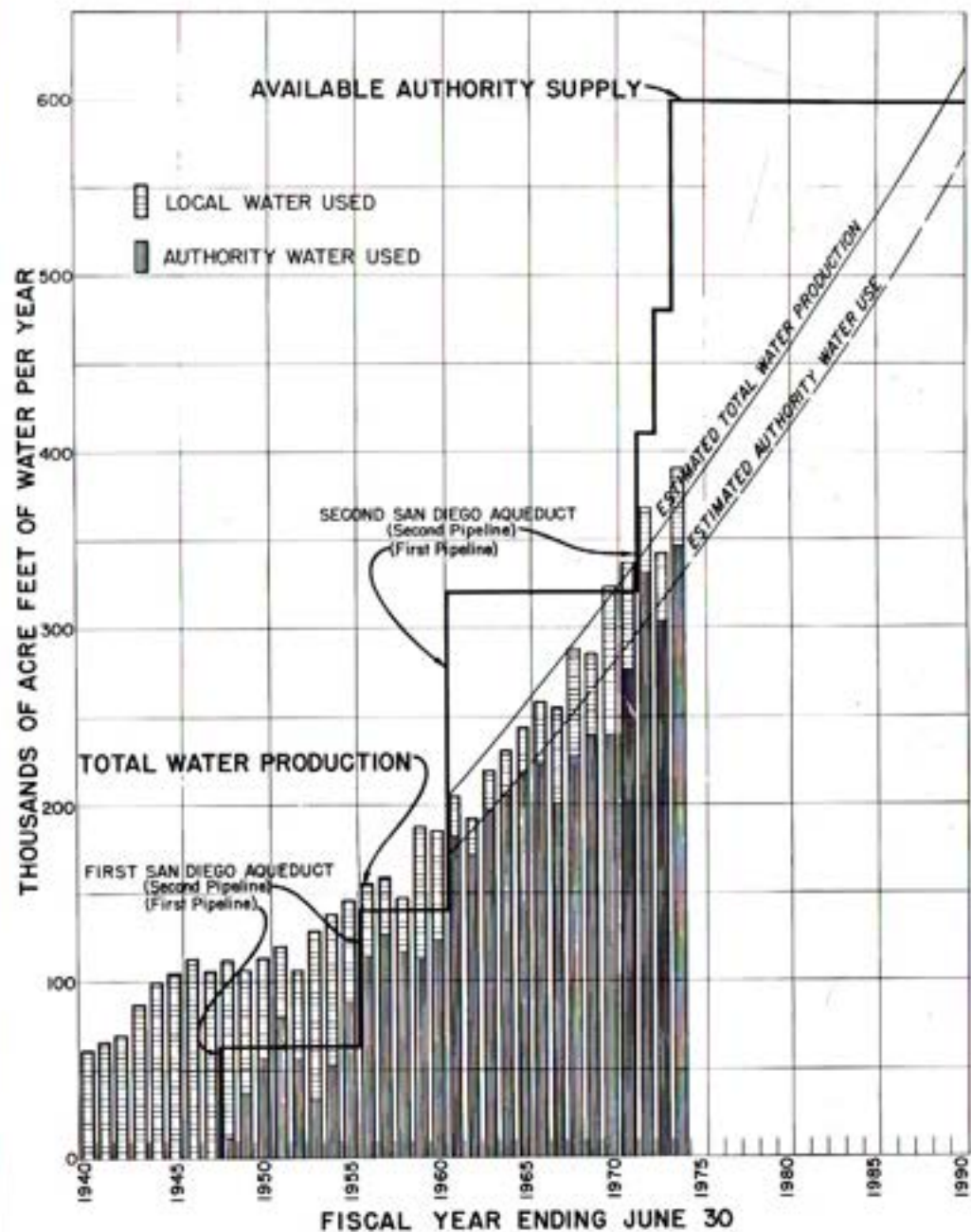


Figure B. Water Production of Authority Member Agencies

water during the fiscal year, including 6,309 af delivered for use in areas outside the Authority. Detailed statistics on agency water production are contained in Table 8. Water production per acre and per capita is shown in Table 9.

Water systems of member agencies are serving an estimated 369,260 acres, about 48 percent of the 762,196 acres within the Authority. The volume of water used per year per acre varies a great deal with the state of development, type of soil, kind of crop and other land use factors. Rainbow MWD and Valley Center MWD are intensively irrigated areas with annual water requirements of 1.83 and 1.29 af per acre, respectively. The relatively undeveloped Otay MWD and Ramona MWD report 0.43 and 0.47 af per acre, respectively. The Authority average for 1973-74 was 1.04 af per acre served.

Per capita water used within the Authority was 0.25 af during the year. Rainbow MWD reports 4.31 af per capita based on an estimated population of 5,000 reflecting a high agricultural demand. The City of National City had the lowest per capita consumption at .12 af.

Figure B shows the combined water production of Authority member agencies. Columns representing annual production are shaded to indicate the proportion of water obtained from local sources and that supplied by the Authority. The chart shows the generally expanding use of imported water and the year to year changes in the quantity of local water used.

Projections of future water production are based on the assumption that additional water will be available when needed. Authority staff projections indicate present facilities are adequate to meet demands for water until approximately 1985. Pipeline 5 may be required prior to this date if treated water demands necessitate utilizing Pipeline 4 for treated water, which would in turn limit raw water capacity into the county.

Agricultural Water Use

Agricultural water use amounted to 23 percent of the total of 390,502 af produced by Authority agencies. MWD has a program which permits a reduced rate for imported water used for agriculture. Because of the Wage-Price Freeze ordered by President Nixon, the credit remained at \$28.50 per acre foot from July 1 to August 13, 1973. When this price freeze was lifted on the latter date, the credit was increased to \$31.00. The size of the credit justifies extensive record keeping and reporting by member agencies and the Authority. To obtain the credit, each agency must certify to the Authority, with supporting data, the total quantity of water used for agriculture. These quantities are shown in Table 10. Yuima MWD had the highest proportionate use of agricultural water at 97.3 percent.

Water Quality

Chemical constituents of the dissolved solids in aqueduct water are shown in Tables 12 and 13. The tables are based on analysis of water delivered to the aqueducts at San Jacinto as made by the laboratory of the Metropolitan Water District at the F. E. Weymouth Filtration Plant in La Verne. Variation in total hardness ranged from a high of 341 parts per million (ppm) to a low of 305 ppm. Hardness is reported as ppm equivalent of calcium carbonate. Water temperature varied from a low of 53°F, recorded in February to a high of 81°F reported in August.

Water Treatment

Throughout the year, Authority water continued to meet or fall below the minimum bacteriological quality standards established by the United States Public Health Service Drinking Water Standards of 1962.

The Authority controls algae growth in pipelines through a program of continuous chlorination. The rate of chlorine application by the Authority during the year ranged from 1 to 2.5 ppm depending on chlorine demand, temperature of the water and other variables. Leak detector and automatic shutoff valve systems provide protection against chlorine leakage. The Rainbow Pass chlorination station serves Pipelines 1, 2 and 3. A temporary station in Auld Valley serves Pipeline 4.

Several Authority member agencies serve areas devoted primarily to agriculture. Because Colorado River water has met State and Federal health standards with simple chlorination, some agencies have distributed water without additional treatment. The practice has been to require dual chlorination, with a time interval of at least one-half hour between applications.

Member agencies serving urban areas have, in most cases, provided for water filtration. Seven filtration plants are now in operation within the Authority providing filtered water to eight member agencies: the cities of San Diego, National City and Del Mar; San Dieguito, Santa Fe and South Bay irrigation districts, Helix Water District; and Poway Municipal Water District.

The California Department of Public Health has indicated it will require complete treatment, which includes coagulation, sedimentation, filtration and chlorination, of State Project water before delivery for domestic consumption. Early in 1969, "The Filtration Study Group" was formed by representatives of several member agencies to determine how complete treatment of water could be best provided. The report issued by this group concluded the most desirable approach to the problem would be to ask the Metropolitan Water District to provide filtered water in Pipeline 3. Subsequently, other agencies indicated their wish to receive such service. In response, the Authority Board of Directors requested MWD to construct a treatment plant with an initial capacity of 150 million gallons a day (mgd) at Lake Skinner. MWD authorized the plant, and construction is under way. Completion is expected in late 1975.

In April 1972, the Authority Board authorized its staff and James M. Montgomery, Consulting Engineers, Inc., to study ways in which the aqueduct system could be operated to permit distribution of treated water to all agencies requesting this service. Early progress reports from this study indicated a deficiency of at least 50 mgd between the total capacity which would be available to Authority member agencies by 1975 and the peak-day demands which would have to be met that year. Demands will, of course, increase in years beyond 1975.

The Staff-Montgomery report draft issued in August 1973 suggested and evaluated several alternative programs of construction and system operation which would meet the treated water demands. Continuous restudy and discussion of these alternatives among and between member agencies has continued throughout the year. Several modifications of the original alternatives have been developed. MWD has been requested, and has agreed, to delay the introduction of northern water into the system until June 1976. Negotiations

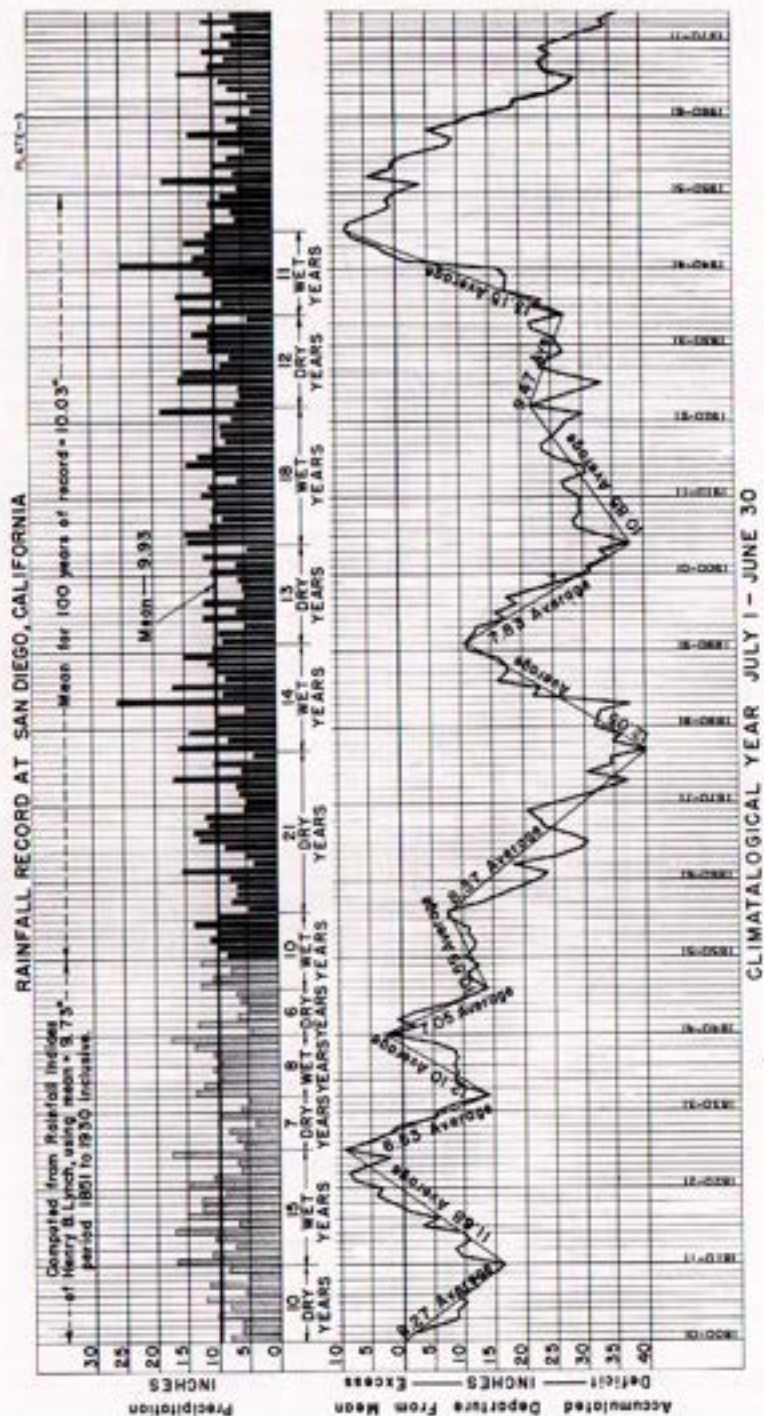
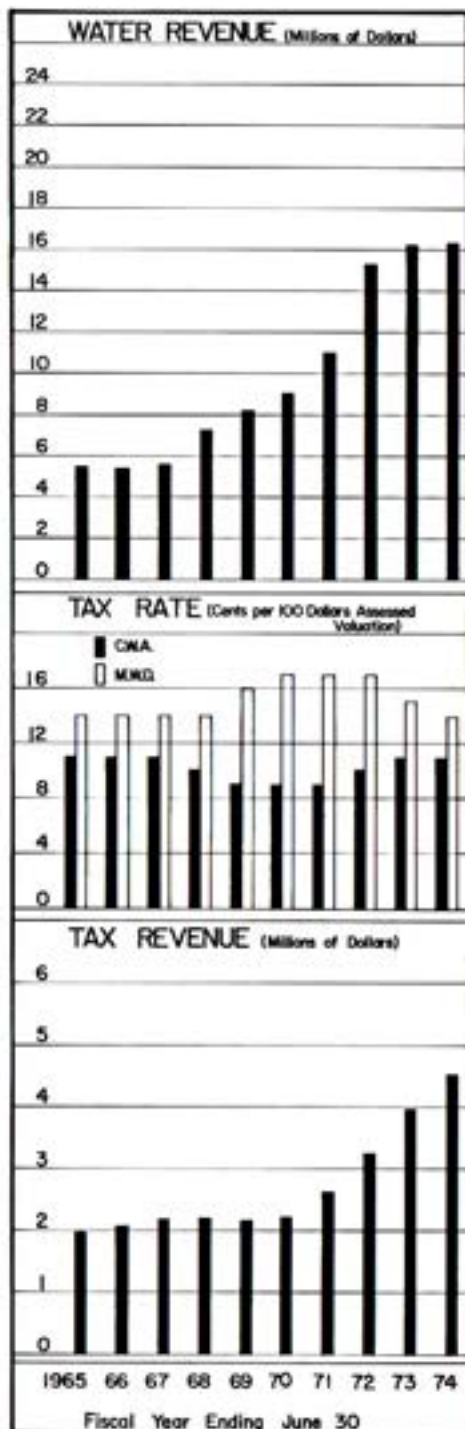


Figure C. Rainfall Record at San Diego, California.



are being conducted between the Authority and the City of San Diego to develop a contract providing for delivery to the Authority of 20 mgd to 45 mgd of treated water from existing City treatment plants. It is expected that the contract resulting from these negotiations will become the prototype for contracts with other agencies having excess filtration capacity.

Independent environmental and economic studies of the various alternatives proposed in the Staff-Montgomery report have also been conducted. Woodward-Envicon, Inc. and URS Research Company have completed preliminary environmental studies, and Dr. Edward J. Neuner provided in May an "Economic Analysis of Filtered Water Alternatives."

The Staff-Montgomery report was officially received by the Board on April 11, 1974.

Allocation of Water Among Member Agencies

The Authority Act (Sec. 5.11) provides the method by which the water supply must be divided among its member agencies should the total demand exceed the Authority's delivery capability. Each agency has a preferential right based on its proportion of all payments to the Authority to meet capital costs (primarily taxes and annexation fees). Allocation by preferential right would be invoked only if agreement were not otherwise possible. Before construction of Pipeline 3, demand exceeded system capacity on several occasions. Voluntary agreement between member agencies and the Authority permitted operation without resort to the provisions of Sec. 5.11. When water and capacity are available, agencies may purchase water without restriction. Table 14 shows the preferential right of each member agency as of June 30, 1974.

Future Supplies

The Water Authority obtains all its water from the Metropolitan Water District of Southern California. At the present time, the only source available to the Authority is the Colorado River through the Colorado River Aqueduct. The MWD Board has adopted a statement of policy, frequently repeated, that when additional water or distribution facilities are needed to meet demands of its member agencies, additional water and/or facilities will be provided.

In view of the growth in Southern California during the decade of the 1950s, it was recognized that additional water supply sources would be required by the early 1970s. The first major step to meet this need was undertaken on November 4, 1960, when MWD entered into a contract with the State of California for 1,500,000 af annually from the State Water Project. As a result of the United States Supreme Court decision in the case of Arizona v. California, Metropolitan faces the loss of nearly half its present 1,212,000 af annual supply from the Colorado River. Subsequently, the MWD-State contract was amended to increase Metropolitan's entitlement to State water. Annexations and other changes have brought the total MWD contract to 2,011,500 af annually.

The California Aqueduct, key water supply feature of the State Project, was officially dedicated May 18, 1973. Water from this system is available to MWD at several points, and is expected to be available to the Authority in June 1976. State Project water for San Diego County will be delivered to MWD at Lake Perris, terminus of the 444-mile California Aqueduct. It will flow through the Lakeview Pipeline, which parallels the Colorado River Aqueduct but moves water in the opposite direction. At the existing canal turnout for the Second San Diego Aqueduct, the northern water will be mixed with Colorado River water, then flow south into Lake Skinner. This reservoir has been filled to capacity with water from the Colorado. After 1976, it is expected to hold a 50-50 blend from the two sources, with a gradual increase in the proportion of northern water.

Originally forecast as adequate to meet the needs of MWD member agencies until 1990, water supplies from these two sources are now expected to be able to meet demands until 2010 or 2020. By that time, population of the District is expected to increase from its present 11 million to 20 million.

For the period beyond that date, when additional supplies may be required, investigations are being made of many possible supplementary sources. The Authority, MWD, the State of California, the Federal government and many private organizations are evaluating the potentials of the undeveloped rivers of northern California, the Columbia River, rivers in Canada and Alaska, waste water reclamation, weather modification, geothermal water development, sea water conversion and other possibilities.

Figure B shows the increase in water requirements within the Authority since 1940.

DESIGN AND CONSTRUCTION

On June 7, 1966, during the same election in which Metropolitan Water District voters approved Proposition W for \$850,000,000 in bond funds to expand its distribution system to deliver State Project water, voters in the Authority

area approved Proposition V for \$30,000,000 to assure distribution of the water throughout the Authority service area. The main features of this system have now been completed.

Pipeline 4

The Second Pipeline of the Second San Diego Aqueduct (Pipeline 4) was the largest of the Proposition V projects undertaken. The MWD portion, from the end of the San Diego Canal in Auld Valley to the Rainbow delivery point, was completed in early 1971. It was designed to provide an additional capacity of 380 cfs.

Phase I of the Water Authority's portion of Pipeline 4 extends from Rainbow to the Crossover Aqueduct diversion structure near San Marcos. It was completed and operational in mid-1971. Phase II, from the Crossover to Escondido Mountain, was completed in May 1972. Phase III, from Escondido Mountain to Miramar Reservoir, was completed in April 1973.

Pomerado Pipeline (Specification 224) includes an extension of Pipeline 4 from Miramar Reservoir to Shepherd Canyon and a section of pipeline in Shepherd Canyon to the intersection of Clairemont Mesa Boulevard and Santo Road in the City of San Diego. This pipeline was placed in service on August 20, 1973, to deliver treated water from the Miramar Plant into the City's system. The pipeline consists of 6.59 miles of 84-, 72- and 54-inch prestressed concrete cylinder pipe. Hydromulching and the planting of 400 Eucalyptus trees along the right of way was started in November 1973 and completed in December.

Relocation of Pipeline 3 to accommodate the realignment of Highway 94 and Highway 125 interchange was completed when final tie-ins were made in December.



Olivenbain No. 2 Service Connection on Pipeline No. 3 south of San Dieguito River. Facilities constructed by SDCWA forces.



Poway No. 3 Service Connection at Stoneridge Golf Course. Structure replaces air release valve enclosure on Pipeline No. 2. Piping in foreground are customer installation. Service connection structure construction by SDCWA forces.

OPERATION AND MAINTENANCE

General

The Authority operates its aqueducts from the Fred A. Neilbron Operations Center at 610 W. Fifth Avenue, Escondido. From that location the Superintendent directs all operations and maintenance functions with a crew of 18 employees. Operation of the aqueducts which serve all member agencies, some with very small reservoir capacity, requires system operators to be on call around the clock. Telephone, two-way radio and telemetering equipment provide the necessary continuous communications throughout the service area.

The Aqueducts and related facilities require continuous routine patrol to cope with vandalism, watch for leaks, and inspect structures, gates, culverts and access roads. In addition to patrol vehicles, the field forces are provided with a variety of equipment, including road graders, bulldozers, compressors, welders and a well-equipped shop. Skilled personnel perform many tasks, including carpentry, painting, electrical, road building, construction and mechanical repair. Operating and maintenance personnel are dispatched by two-way radio. Base stations are located in San Diego, Escondido and at Lake Skinner, with a repeater station on Palomar Mountain. The Authority maintains 15 mobile units in operation, maintenance and construction.

General Activities

During July, MWD started routing water through Lake Skinner into Pipelines 3 and 4. Some problems of water quality deterioration developed, including high turbidity, lowered pH and a noticeable increase in odor-producing microorganisms. The situation improved after several days of operation when a change was made in the reservoir outlet level. Unusually high coliform bacteria counts were reported, but indications were that organisms causing the problem were predominantly soil bacteria resistant to chlorine treatment.

Cool and cloudy weather was predominant through the summer of 1973, resulting in low flows through the aqueducts during what are normally peak months.

During August, a new parallel chlorine manifold and evaporator was installed at the Rainbow station. This system permits servicing of evaporators while the station is in operation.

Water service through Rainbow No. 7 Service Connection was begun August 24.

In September, monuments were set on a portion of Pipeline 4, and the semi-annual foot patrol of the aqueducts was completed. No irregularities were found. MWD ran a capacity test on Pipeline 3, during which foaming was experienced at the top of the vent structure north of the county line at a flow of 255 cfs which was held for 24 hours.

San Jacinto Reservoir was taken out of service on October 24. Water for Pipeline 2 was subsequently taken from Pipeline 3 at Rainbow Pass and Pipeline 1 received water directly from the San Diego Canal at their crossing near San Jacinto.

A combined crew of maintenance and construction personnel started salvaging components of the Office of Saline Water San Diego Test Facility during October. The Authority received materials that had an original value of approximately \$935,000. By March, all salvage had been moved from Chula Vista to Escondido and inventoried.

On December 3, Pipelines 1 and 2 were taken out of service to permit internal inspection by representatives of the Bureau of Reclamation and Authority staff. All facilities inspected (Lilac Tunnel, San Luis Rey inverted siphon, Red Mountain Tunnel, Oat Hill Tunnel and Lake Hodges inverted siphon) were in excellent condition. The pipelines were returned to service December 7.

On December 16, MWD shut down Pipelines 3 and 4 to remove the bulkhead in the main influent line at Skinner Filtration Plant. This shutdown lasted through December 19, and was extended until December 22 on Pipeline 3 south of Miramar to permit the contractor to complete the tie-in at the Highways 94-125 realignment in La Mesa.

On January 14, Lake Skinner was filled to near capacity with 42,000 acre feet. During February, it was lowered to 22,000 acre feet to facilitate installation of rate of flow indicators in the inlet canal.

Kick plates, hand rails and guard chains were installed at twenty aqueduct stations during April to comply with Occupational Safety and Health Act (OSHA) regulations. New steps, a platform and guard rails were installed at the terminal structure. Some of the salvaged desalting plant materials were used for this purpose.

An all-day familiarization program, attended by fifteen operators from five member agencies, was conducted by Authority personnel during April.

Throughout March, April and May there were numerous complaints of algae in aqueduct water. The algae plugged filters and clogged sprinklers at a rate which presented serious operational problems. Investigation showed most of the algae originated at Lake Skinner, especially near the outlet structure. The lake was treated with copper sulfate several times during this period. Algae content remained high until the end of May.

The annual Engineering and Operations Committee field inspection of the aqueducts was made April 25. Eleven directors participated in the inspection, which included the Crossover Terminal and Diversion structures, south portal of Oat Hills Tunnel, Lake Skinner, Skinner Filtration Plant, Rainbow and Auld Valley Chlorination stations, Rincon No. 1, Bueno No. 1, Rainbow Nos. 5 and 7 and Carlsbad No. 1 service connections; the Heilbron Center yard and operations room, and the large pump and motor stored at the City of Escondido yard.

During the period June 24 to 30, San Diego County experienced a hot spell with temperatures exceeding 100°F in most areas. Maximum aqueduct flows recorded during the entire fiscal year occurred during this period, reaching a peak flow of 689 cfs. Pipeline 2, out of service in October, was still not available in June. Demands for water in the First Aqueduct in excess of 90 cfs (Pipeline 1's capacity) were met by transferring water from Pipeline 3 at Rainbow Pass.

LEGAL DEPARTMENT

The legal department continued to furnish advice and representation as needed.

All pending litigation was terminated during the year. Three condemnation cases involving right of way acquisitions for Pipeline No. 4 resulted in judgments of just compensation for the owners. The appeal filed by environmental groups from the judgment which permitted continuation of construction of the Pomerado pipeline was dismissed.

The contract which provides temporary water service to the City of Tijuana, Mexico was amended in a minor way involving the furnishing of power by Mexico to American interests. The contract involves the Authority, the Metropolitan Water District, the City of San Diego, the Otay Municipal Water District, and the United States.

The sum of \$75,351.84 was received during the year from the pipeline anti-trust settlement which brings to \$1,770,899.17 the total received.

Guidelines and amendments thereto were prepared and adopted by the Board of Directors pertaining to the Environmental Quality Act of 1970, as amended (Public Resources Code §§21000 et seq.) and the Government Conflict of Interest Act (Government Code §§3600 et seq.).

Routine review of appointments to the Board of Directors, actions taken by the Board, and annexations to the Authority was performed. Right of way problems continue to occupy considerable staff time.

Of special interest was the review of proceedings relative to the continuing study of the most feasible and desirable methods to provide filtration of the water imported by the Authority into San Diego County. This filtration requires close cooperation between the member agencies of the Authority. The role of the Authority, which is evolving, will be to coordinate the needs and capabilities of the various members so that all can receive filtered water at reasonable cost. A proto type contract with the City of San Diego is being formulated for this purpose. The filtered water available for delivery by the Authority will come either from the Skinner Treatment Plant of the Metropolitan Water District or from member agencies pursuant to contracts to be negotiated.

TREASURER'S REPORT

The Treasurer is appointed by the Board of Directors, serves at their pleasure without remuneration, and is responsible for the funds of the Authority.

Acting under policies adopted by the Board of Directors, the Treasurer invests funds, deemed to be idle by the Director of Finance, in interest-bearing bank time deposits, in direct obligations of the Federal Government and in obligations of Federal agencies. The investments in Federal Agency securities are made only when there is no evidence of need for the funds prior to the maturity of the agency obligations.

In accordance with the Administrative Code, the Treasurer is to report to the Board of Directors in summary form the financial transactions under his control at the end of each fiscal year.

For the fiscal year ending June 30, 1974, income was received in the total amount of \$22,084,835. Disbursements during this same period totaled \$21,865,172. As of June 30, 1974, the Treasurer had under his control funds and investments totaling \$7,087,653.

Income received was in the following categories:

Sales of water	\$16,135,103	
Taxes including annexation charges	4,529,203	
Interest earned on investments	617,022	
Contract payments from Metropolitan Water District	571,689	
Tijuana water service	146,430	
Miscellaneous	85,388	
Total Income		<u>\$22,084,835</u>

Disbursements were as follows:

Purchase of water	\$15,713,900	
Outlay for property, plant and equipment	653,585	
Operation and maintenance	644,423	
Debt service, principal and interest	4,853,264	
Total Disbursements		<u>\$21,865,172</u>

As of June 30, 1974, the Treasurer's accountability for \$7,087,653 was on deposit as follows:

Demand deposit	\$ 42,853	
Time deposits	7,045,000	
Total		<u>\$ 7,087,653</u>

METROPOLITAN WATER DISTRICT MEMBERSHIP

The San Diego County Water Authority receives its entire supply of water from The Metropolitan Water District of Southern California, is a member agency of that District, and works very closely with it. A brief description of MWD's organization and operations may, therefore, be of interest to readers of this report.

MWD was organized in 1928 under the Metropolitan Water Districts Act, which had been enacted the previous year. The original act provided for membership by cities only, but it was later amended to permit annexations by large water districts. The District now includes the original 13 cities, one city added in 1971, 12 municipal water districts, and the San Diego County Water Authority.

The legislative acts governing Metropolitan and the Authority are very similar. MWD policy is established by a board of directors. Each director is appointed by the chief executive officer of the agency he represents, with approval from its legislative body. Under present MWD rules, each member agency is entitled to one director, plus an additional director for each three

percent of the total District assessed valuation which lies within the member agency's boundaries. Figure D lists the 27 member agencies of the District.

The Authority began the fiscal year with three representatives on the Metropolitan Board of Directors, although it was entitled to four. No successor had been appointed to fill the vacancy created by Fred A. Heilbron's death.

Director Hans H. Doe, who has served on the Metropolitan board for 14 years, is a member of the Executive, Water Problems, Organization and Personnel, and Special Advisory Nuclear Power and Desalting Plant committees.

Director Harry Griffen, an MWD board member for eleven years, is a member of the Finance and Insurance Committee and chairman of its Audit Subcommittee. He is also a member of the Water Problems Committee and the Special Committee on Charges and Payments Under the State Contract.

Director Ralph E. Graham, a three-year MWD board member, is on the Engineering and Operations, and Land Committees.

In July, Chairman R. E. Badger was appointed to fill the MWD directorship left vacant by the death of Chairman Heilbron. He now serves as a member of the Engineering and Operations, and Legal and Claims Committees.

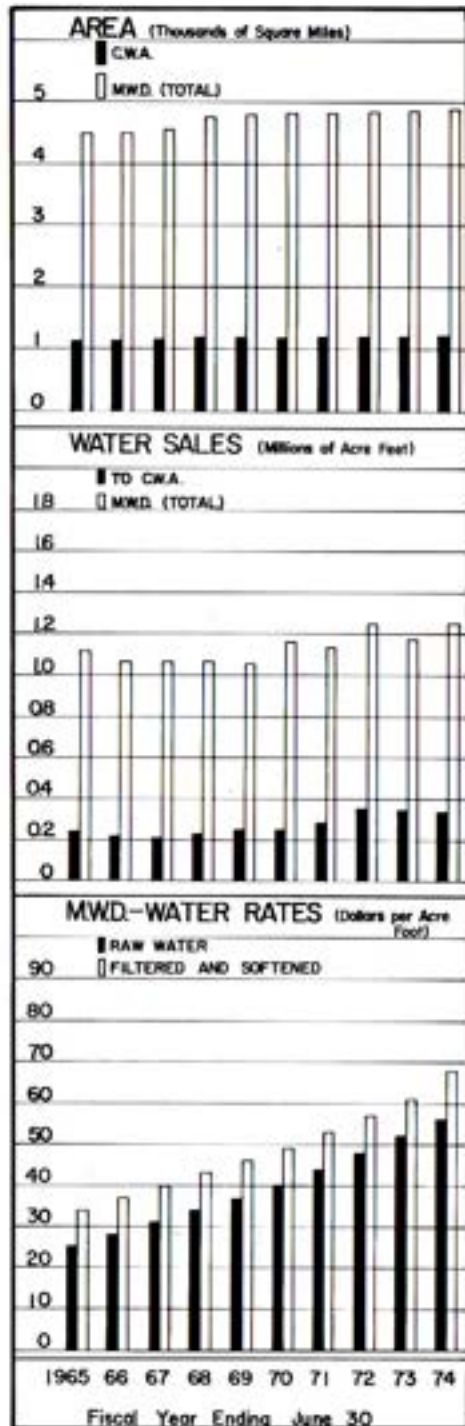
Following certification of assessed valuations by the various county assessors in August, it was determined that the Authority was entitled to an additional representative on the Metropolitan board. Accordingly, Director Lloyd L. Lee was appointed to the post. He has since been assigned to the Finance and Insurance Committee and Land Committee.

As of June 30, 1974, the Authority had a total of 363 votes out of 2,899 or 12.5 percent of the total. The representative(s) of each member agency is entitled to cast one vote for each ten million dollars, or major fraction thereof, of assessed valuation within the agency's boundaries. Each representative of an agency with a multi-member delegation is entitled to vote a fraction of the total number of his agency's votes proportionate to the number of representatives present.

Figure E shows the Metropolitan Water District system and the areas it serves. Portions of Ventura, Los Angeles, Orange, Riverside, San Bernardino and San Diego counties are within the District. Within this area are 124 incorporated cities. During the year, 877 acres were annexed to MWD, of which 720 acres were also annexed to the Authority. As of June 30, 1974, District area equaled 4,887 square miles (3,127,680 acres), of which 1,189.8 square miles (761,482 acres) or 24.3 percent, lie within the boundaries of the Authority.

Assessed Valuation

Total assessed valuation of taxable property lying within the boundaries of the Metropolitan Water District, as determined by the several county assessors for use in levying 1973-74 taxes, was \$32,838,476,378. This was an increase of \$1,826,955,737, or 5.9 percent over the 1972-73 valuation of \$31,011,520,641. An amount of \$480,287,731, or 26.3 percent of this increase occurred within the Authority boundaries. Assessed valuation within the Authority is 12.5 percent of the MWD total valuation.



Water Sales

A total of 1,249,189 af of water was delivered by MWD during fiscal year 1973-74. Of this amount, 1,058,455 af was from the Colorado River and 190,734 af was from the California Aqueduct. The Authority, which can receive only untreated Colorado River water at present, took 327,620 af, 26 percent of the MWD total and 31 percent of the Colorado River supply.

Metropolitan operates the F. E. Weymouth Softening and Filtration Plant at La Verne, which has a 400 mgd capacity; the Robert B. Diemer Filtration Plant at Yorba Linda, with 400 mgd capacity; and the Joseph Jensen Filtration Plant at Granada Hills, with an initial capacity of 200 mgd from the West Branch of the California Aqueduct only. The Authority cannot be served from any of these plants. The Robert A. Skinner Filtration Plant, now under construction near Lake Skinner, is scheduled for completion in 1975. It will provide filtered water to the Authority, and will have an initial capacity of 150 mgd.

Tax Rate

During fiscal 1973-74, MWD lowered its tax rate from the 1972-73 rate of 15¢ per \$100 of assessed valuation to 14¢/\$100. When the Authority annexed to MWD in 1946, the tax rate was 50¢/\$100. The tax rate for each year from that time is shown in Table 19. The total MWD tax levy during the report year, including regular and special taxes, was approximately \$46,338,100, of which \$5,799,400 or 12.5 percent was levied against property within Authority boundaries. Special taxes are levied when an area annexing to the District decides to amortize its annexation fees over a 30-year period. As of the fiscal year's end, Authority member agencies had assumed annexation fee liability totaling \$27,653,129, of which \$15,404,230 had been paid by the end of the fiscal year.

COLORADO RIVER BOARD MEMBERSHIP

The Colorado River Board of California is an agency of the State devoted to the protection of the rights of California agencies to Colorado River water. Six agencies - San Diego County Water Authority, Metropolitan Water District, City of Los Angeles Department of Water and Power, Imperial Irrigation District, Coachella Valley County Water District, and Palo Verde Valley Irrigation District - are represented on the Board. Chairman Raymond E. Badger is the Authority's representative. Once fully financed from the State budget, the Board now receives one-third of its support from that source. The remaining amount is contributed by the six agencies as follows: Metropolitan Water District, 44-1/2 percent; Los Angeles Department of Water and Power, 28-1/2 percent; Imperial Irrigation District, 19 percent; Coachella Valley Water District, five percent; San Diego County Water Authority, two percent; and Palo Verde Irrigation District, one percent.



Robert A. Skinner Treatment Plant looking northeasterly towards Lake Skinner. Note dam in background. (Photo courtesy of Metropolitan Water District.)

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Table 1
AREA - AUTHORITY MEMBER AGENCIES

Member Agencies	Area Within Authority			Percent of Total Authority Area 6/30/74
	As of 6/30/73 (acres)	Changes During Year (acres)	As of 6/30/74 (acres)	
Bueno Colorado M. W. D.	48,930	(1) -62	(2) 48,868	6.42
In City of San Marcos	(7,700)	(+1,260)	(8,960)	(1.18)
In City of Vista	(7,600)	(0)	(7,600)	(1.00)
Carlsbad M. W. D.	20,214	+1	(3) 20,215	2.85
In City of Carlsbad	(12,800)	(+4,540)	(17,340)	(2.28)
Del Mar, City of	1,082	0	1,082	0.14
De Luz Heights M. W. D.	11,830	0	11,830	1.55
Escondido, City of	12,583	+200	12,783	1.68
Fallbrook Public Utility District ..	15,759	0	15,759	2.07
Helix Water District	31,464	+31	(4) 31,495	4.14
In City of El Cajon	(7,772)	(+154)	(7,926)	(1.04)
In City of La Mesa	(5,014)	(+7)	(5,021)	(0.66)
National City, City of	5,400	+19	5,419	0.71
Oceanside, City of	23,850	+714	24,573	3.23
Olivenhain M. W. D.	27,558	-150	(5) 27,408	3.60
Otay M. W. D.	63,895	0	(6) 63,895	8.39
Poway M. W. D.	22,889	0	22,889	3.01
Rainbow M. W. D.	47,043	+56	(10) 47,099	6.19
Ramona M. W. D.	47,578	0	47,578	6.25
Rincon del Diablo M. W. D.	17,572	(1) -200	(7) 17,372	2.28
Rio San Diego M. W. D.	54,244	-31	(8) 54,213	7.12
San Diego, City of	202,704	0	202,704	26.62
San Diego Irrigation District ..	5,439	+158	5,597	0.73
Santa Fe Irrigation District	10,206	-9	10,197	1.34
South Bay Irrigation District	15,500	(1) -19	(9) 15,571	2.04
In City of Chula Vista	(12,960)	(+510)	(12,570)	(1.65)
Valley Center M. W. D.	62,110	+12	62,122	8.16
Yuima M. W. D.	12,813	0	12,813	1.68
Total Authority Area	760,762	+720	761,482	100.00
San Diego County			2,725,100	

- (1) Includes area annexed by an adjacent city member agency but still in district, being an overlapping area and considered here as being part of the city.
- (2) Does not include 2,714 acres overlapping in City of Oceanside and 284 acres overlapping in City of Escondido.
- (3) Does not include 201 acres overlapping in City of Oceanside.
- (4) Does not include 21 acres overlapping in City of San Diego.
- (5) Does not include 5 acres overlapping in City of San Diego.
- (6) Does not include 726 acres overlapping in City of San Diego.
- (7) Does not include 8,865 acres overlapping in City of Escondido and 39 acres overlapping in City of San Diego.
- (8) Does not include 12 acres overlapping in City of San Diego.
- (9) Does not include 297 acres overlapping in City of San Diego and 645 acres overlapping in City of National City.
- (10) Does not include 701 acres overlapping in City of Oceanside.

Table 2
POPULATION GROWTH - COUNTY AND AUTHORITY AREA

1910 to 1974

(Includes Resident Military Personnel)

Year (as of April 1)	COUNTY		AUTHORITY		Percent of County Population in Authority
	Total Population (1)	Average Annual Growth	Total Population	Average Annual Growth	
1910	61,663				
1920	112,248	5,058			
1930	209,859	9,741			
1940	289,348	7,909			
1946	(3) 502,804	26,746	(3) 440,659	2,807	88
1950	556,808	42,478	(2) 451,886	50,083	81
1955	(4) 769,200	52,762	(2) 707,300	50,820	91
1960	1,033,010	32,198	(3) 956,400	38,720	93
1965	(4) 1,194,000	23,360	(5) 1,150,000	21,000	96
1970	(4) 1,310,800	86,900	(5) 1,255,000	79,700	96
1971	(4) 1,397,700	77,300	(5) 1,334,700	56,300	95
1972	(4) 1,475,000	46,500	(5) 1,391,000	68,500	94
1973	(4) 1,521,500	40,600	(5) 1,459,500	47,800	96
1974	(4) 1,562,100		(5) 1,507,300		96

- (1) County population from U. S. Census Bureau Reports.
- (2) Authority population based on U. S. Census Bureau Reports.
- (3) Based on Special Census, U. S. Census Bureau, exclusive of emergency military personnel due to World War II.
- (4) Estimated by the San Diego Chamber of Commerce.
- (5) Estimated by Authority member agencies.

Table 3
POPULATION - AUTHORITY MEMBER AGENCIES AND COUNTY
(Includes Resident Military Personnel)

Member Agencies	Area 6/30/74 Acres	Population - U.S. Census				Average Annual Increase 1970-74		Density of Population 1974	
		1969	1970	Decade Increase 1960-70	1974 Estimate	Percent	Per Acres	Per Sq. Mile	
		(1)	(2)	Percent	(3)	Percent	Per Acres	Per Sq. Mile	
Bueno Colorado M. W. D.	45,868	39,090	24	54,700	10	1.12	716		
In City of San Marcos	(8,969)	(3,990)	--	(9,000)	33	1.00	643		
In City of Vista	(7,609)	(24,090)	--	(25,000)	5	3.82	2,442		
Carlsbad M. W. D.	20,215	15,290	55	20,000	9	1.03	659		
In City of Carlsbad	(17,344)	(9,409)	58	(19,200)	7	1.11	708		
Del Mar, City of	1,082	3,990	--	4,900	6	4.53	2,898		
De Luz Heights M. W. D.	11,830	---	---	150	0	0.01	8		
Escondido, City of	12,783	38,000	85	47,000	8	3.66	2,333		
Failbrook Public Utility District	13,728	15,000	20	14,500	4	0.89	571		
Helix Water District	21,495	183,000	33	183,000	3	8.80	3,722		
In City of El Cajon	(7,256)	(50,000)	26	(60,500)	5	7.66	4,917		
In City of La Mesa	(5,623)	(28,000)	30	(44,400)	4	8.84	5,639		
National City, City of	5,419	28,000	31	42,000	3	8.11	5,191		
Oceanside, City of	24,573	40,700	43	52,700	7	2.14	1,373		
Olivestain M. W. D.	27,495	2,000	990	16,000	100	0.56	234		
Otay M. W. D.	63,895	19,400	259	33,000	18	0.52	331		
Poway M. W. D.	22,889	14,000	192	22,300	20	1.11	707		
Rainbow M. W. D.	47,969	2,900	50	5,000	5	0.11	68		
Ranoma M. W. D.	47,378	3,600	21	5,000	4	0.17	108		
Rincon del Diablo M. W. D.	17,372	14,000	35	21,800	4	1.26	803		
Rio San Diego M. W. D.	34,212	25,200	86	79,480	13	1.39	831		
Sea Diego, City of	282,704	675,800	23	777,300	4	3.53	2,454		
Sea Diego Irrigation District	5,367	15,000	45	24,800	3	4.43	2,838		
Santa Fe Irrigation District	10,387	7,700	12	19,000	4	0.95	624		
South Bay Irrigation District	12,371	64,300	24	86,050	2	3.53	3,537		
In City of Chula Vista	(12,370)	(64,200)	32	(73,100)	3	3.82	3,722		
Valley Center M. W. D.	62,122	3,600	94	10,200	13	0.17	108		
Yuma M. W. D.	12,813	---	---	1,250	0	0.16	82		
Total Authority	761,482	933,290	31	1,307,200	5	1.99	1,267		
San Diego County	2,723,190	1,021,010	27	1,565,100	3	0.57	367		

(1) Population in agencies other than cities was furnished by agencies.
(2) Estimated by agencies.

Table 4
ASSESSED VALUATIONS - AUTHORITY MEMBER AGENCIES AND COUNTY

Member Agencies	Area 6/30/74 Acres	Assessed Valuation - Secured and Unsecured			Total	Per Acres
		1973-74		1974-75		
		Total	Percent Increase	Total		
Bueno Colorado M. W. D.	48,868	\$ 135,309,178	20.1	\$ 162,562,435	\$ 192,739,329	\$ 3,944
Carlsbad M. W. D.	20,215	88,665,121	18.1	104,679,216	127,823,503	6,323
Del Mar, City of	1,082	18,232,666	31.8	24,038,056	25,987,798	24,018
De Luz Heights M. W. D.	11,830	2,234,993	6.0	2,370,122	2,437,724	206
Escondido, City of	12,783	97,001,431	9.8	106,477,819	133,080,915	10,411
Failbrook Public Utility District	15,759	31,446,925	24.3	39,104,143	42,216,221	2,679
Helix Water District	31,495	387,393,781	10.3	427,231,665	493,668,194	15,674
National City, City of	5,419	68,421,364	9.7	75,050,212	79,478,453	14,667
Oceanside, City of	24,573	110,527,231	10.5	122,142,122	144,237,539	5,870
Olivestain M. W. D.	27,498	27,997,953	30.1	36,421,721	49,395,211	1,810
Otay M. W. D.	63,895	69,874,390	12.8	78,625,196	101,964,882	1,596
Poway M. W. D.	22,889	48,250,490	15.1	55,538,821	64,273,233	2,808
Rainbow M. W. D.	47,969	40,346,433	11.3	44,920,809	50,936,477	1,081
Ranoma M. W. D.	47,378	21,510,574	32.8	28,556,987	35,039,309	737
Rincon del Diablo M. W. D.	17,372	47,337,149	10.8	52,449,186	74,694,648	4,300
Rio San Diego M. W. D.	34,212	106,802,065	14.9	122,763,223	138,427,557	2,553
San Diego, City of	202,704	1,950,022,343	13.5	2,213,996,401	2,513,999,549	12,400
San Diego Irrigation District	5,397	46,389,566	30.7	60,897,922	75,473,190	13,485
Santa Fe Irrigation District	10,197	54,171,601	16.7	63,205,906	85,661,585	8,401
South Bay Irrigation District	15,571	237,310,545	3.5	245,705,256	293,314,905	18,850
Valley Center M. W. D.	62,122	35,361,536	7.2	37,923,386	41,852,639	664
Yuma M. W. D.	12,813	9,253,333	2.0	9,469,808	9,636,421	752
Total Authority	761,482	\$3,634,092,751	13.2	\$4,114,380,452	\$4,775,761,282	\$ 6,272
San Diego County	1,950,000	\$3,531,612,531	13.2	\$4,362,535,878	\$5,031,617,712	\$ 4,025

(1) Excluding 1,475,100 acres of tax-exempt lands in San Diego County.

SAN DIEGO COUNTY WATER AUTHORITY

Table 5
AUTHORITY SALES OF COLORADO RIVER WATER-FISCAL YEAR 1973-74
(All Figures in Acre Feet)

Member Agencies	July	August	Sept.	Oct.	Nov.	Dec.	Total 6 Months
Bueno Colorado M. W. D.	1,981.4	1,090.6	898.3	1,279.3	1,139.2	434.9	5,863.7
Carlsbad M. W. D.	1,996.7	1,336.1	1,243.0	1,232.8	757.3	378.5	6,678.4
Del Mar, City of	85.6	189.1	197.0	86.3	64.9	64.9	517.8
De Luz Heights M. W. D.	10.1	8.2	10.4	10.2	8.8	4.8	50.5
Escondido, City of	1,745.1	859.2	657.2	1,070.7	1,144.3	610.0	5,527.1
Fallbrook P. U. D.	1,564.9	1,486.3	1,243.2	1,432.3	763.4	587.5	7,131.6
Helix W. D.	3,375.9	2,586.5	2,098.5	1,640.9	1,056.6	1,389.8	12,090.2
National City & South Bay L. D. .	1,230.5	1,236.4	1,141.6	1,233.3	1,174.7	1,961.3	7,120.8
Oceanside, City of	1,494.4	1,618.8	1,443.5	1,368.0	971.3	651.5	7,489.5
Olivewood M. W. D.	370.7	348.2	382.0	266.3	151.3	85.1	1,518.6
Otay M. W. D.	1,487.9	1,494.3	1,593.6	1,481.0	796.4	545.8	7,595.0
Poway M. W. D.	1,050.0	991.9	812.8	785.2	432.5	295.8	4,367.2
Rainbow M. W. D.	2,719.4	2,794.2	2,639.0	2,579.4	1,533.2	662.7	13,677.9
Rancho M. W. D.	444.1	468.9	498.2	373.1	218.7	158.5	2,160.5
Rincon del Diablo M. W. D.	404.0	432.0	395.9	365.0	184.8	146.6	1,949.7
Rio San Diego M. W. D.	1,184.0	1,172.5	955.5	904.1	630.1	311.1	5,363.3
San Diego, City of	15,955.8	17,535.7	15,618.9	13,329.9	8,420.1	6,188.0	76,168.4
San Diego L. D.	590.2	534.0	497.3	436.6	333.2	262.1	2,563.4
Santa Fe L. D.	923.1	949.4	714.8	648.0	391.1	228.8	3,855.2
Valley Center M. W. D.	2,868.5	2,978.6	2,299.7	1,958.2	1,168.1	486.8	11,679.9
Yuma M. W. D.	470.7	423.7	369.2	361.9	167.1	77.3	1,899.9
Total Sales to Agencies	38,362.0	40,678.2	35,441.6	32,679.3	21,459.1	14,962.4	183,982.6
Total Sales to Others	*857.8	*834.3	*687.0	*783.6	*733.1	*560.5	*4,546.3
Total Sales to Agencies and Others	39,219.8	41,512.5	36,128.6	33,462.9	22,192.2	15,522.9	188,528.9
Total to Authority Storage	+1,000.0	0	0	0	0	0	+1,000.0
Total from Authority Storage ..	-97.0	-6,249.9	-5,017.6	-3,643.6	-93.7	-36.0	-15,139.9
Total Flow in Authority System.	48,622.8	35,262.5	31,111.0	29,819.3	22,098.5	15,472.9	174,378.2
Total Evaporation Losses	160.2	148.2	87.7	50.9	28.2	13.4	488.6
(Authority Storage in San Vicente & Lower Otay Reservoirs)							
Rate of Flow (c.f.s.)							
To Agencies and Others	646.9	675.1	697.1	544.2	372.8	252.4	516.4
To Authority Storage	+16.3	0	0	0	0	0	+16.3
From Authority Storage	-1.6	-101.6	-84.3	-59.2	-1.4	-0.8	-151.5
Flow in Authority System ...	660.7	573.5	622.8	485.0	371.2	251.6	477.8

*To Authority's Contractor for Construction and to Otay for delivery to Tijuana.

TABLES

Table 5
(Continued)

	Jan.	Feb.	March	April	May	June	Total 6 Months	Yearly Total	Yearly Average cfs
	575.7	966.5	763.0	1,201.7	894.7	1,367.5	5,873.1	11,736.8	16.2
	363.9	592.9	594.7	805.0	828.0	865.8	3,981.2	10,059.6	13.9
	51.2	35.3	54.9	70.5	87.4	96.5	425.8	941.6	1.3
	2.3	5.1	3.7	5.8	12.2	15.6	48.7	99.2	6.1
	610.2	1,191.9	789.7	1,353.9	1,628.4	2,913.7	7,396.8	12,934.0	17.9
	236.0	713.0	389.7	1,014.7	1,227.4	1,465.9	5,031.7	12,163.3	16.8
	1,923.8	2,099.2	2,068.2	2,047.2	2,363.6	3,369.5	15,911.5	27,971.7	38.4
	1,926.6	876.1	1,319.3	2,308.1	2,124.4	1,787.9	9,435.4	16,556.2	22.9
	963.7	1,099.5	689.6	1,249.2	1,500.9	1,678.0	7,021.2	14,510.7	20.0
	64.1	134.5	123.9	275.0	324.1	387.2	1,338.8	2,837.4	4.0
	347.4	587.4	568.5	820.6	908.8	1,291.0	4,443.7	12,047.7	16.0
	319.3	532.1	497.8	635.9	681.5	916.5	3,693.1	8,089.9	11.1
	361.4	1,122.6	818.6	1,729.6	2,133.2	2,683.2	8,788.6	21,628.5	30.2
	114.4	177.4	139.6	291.4	394.6	477.2	1,594.6	3,755.1	5.2
	60.3	192.1	222.8	168.1	238.5	412.9	1,395.0	3,344.7	4.6
	480.0	560.3	582.2	660.3	1,117.6	1,398.2	5,997.8	10,371.1	14.3
	5,792.2	6,448.0	7,394.1	7,737.5	9,968.2	10,960.2	48,330.2	124,698.6	172.2
	266.2	392.9	399.5	435.0	468.9	541.7	2,533.3	4,816.7	6.7
	168.7	362.8	263.5	365.1	668.0	833.2	2,863.3	6,736.5	9.3
	150.8	337.9	487.3	2,162.6	2,523.4	2,863.4	8,725.4	20,345.3	28.1
	10.0	118.2	23.8	168.3	335.9	360.9	1,046.2	2,936.1	4.1
	12,726.2	18,438.7	18,088.3	27,054.8	31,639.3	35,846.2	146,793.5	328,776.1	454.1
	*777.6	*763.5	*789.7	*759.1	*770.4	*843.8	*4,435.1	*8,081.6	12.4
	14,503.8	19,142.2	18,868.0	27,813.9	32,409.7	36,689.9	149,228.6	337,757.7	466.5
	+326.5	+3,800.0	+7,148.6	+2,291.3	+1,117.1	0	14,683.5	+15,483.5	+21.7
	-30.0	-34.0	-58.0	-65.9	-87.6	-104.0	-420.0	-10,568.9	-12.5
	14,790.3	22,868.2	25,957.6	30,049.2	33,439.8	36,586.0	163,302.1	327,890.2	466.7
	22.4	24.1	33.2	97.1	117.2	148.9	484.9	933.5	1.3
	723.9	344.7	306.9	467.4	327.1	613.2	415.7	466.5	
	+5.3	+68.4	+116.2	+38.5	+18.2	0	+40.9	+21.7	
	-0.8	-1.0	-0.8	-1.1	-1.4	-1.7	-1.2	-21.5	
	240.4	412.1	422.3	504.8	543.9	611.5	455.4	466.7	

Table 4
WATER SALES - 1947 to 1974
(All figures in acre feet)

Member agencies	(1) 1947-46	1966-67	1967-68	1968-69	1969-70	1970-71	1971-72	1972-73	1973-74	Total
Buena Colorado M. W. D.	95,399	9,633	8,323	8,147	3,235	6,245	13,000	9,854	11,737	155,677
Carlsbad M. W. D.	49,755	6,222	6,095	6,950	7,885	8,745	8,330	8,974	10,009	114,927
Del Mar, City of	179	632	767	772	868	833	844	850	942	6,778
De Luz Heights M. W. D.	-	0	0	0	0	0	0	9	99	109
Escondido, City of	28,569	3,270	4,134	4,455	4,989	6,781	15,085	12,937	12,934	92,134
Fallbrook Public Utility District	126,022	9,849	11,031	10,910	11,143	11,168	13,065	10,852	12,163	215,302
Helix Water District	275,788	18,844	25,200	22,586	23,059	30,346	31,782	30,151	27,972	487,768
National City & South Bay L.D.	177,249	8,548	12,013	10,956	13,524	17,156	20,399	17,373	16,556	289,844
Oceanside, City of	54,837	7,543	8,086	8,751	10,056	11,484	12,972	12,842	14,511	141,352
Olivenshain M. W. D.	3,227	803	1,111	1,189	1,923	1,606	2,245	2,257	2,837	17,221
Otay M. W. D.	26,773	9,248	9,316	8,471	9,037	9,769	10,666	9,643	12,043	103,986
Poway M. W. D.	22,056	3,423	3,957	3,882	4,375	4,648	6,493	6,257	8,069	63,181
Rainbow M. W. D.	83,977	12,724	14,535	13,926	17,659	17,857	18,156	21,858	22,881	222,881
Ranoma M. W. D.	4,334	860	1,172	1,280	1,677	1,785	2,420	2,639	3,755	20,122
Rincon del Diablo M. W. D.	69,502	4,849	4,810	7,917	4,815	7,874	4,026	2,396	3,345	109,764
Rio San Diego M. W. D.	27,662	4,692	3,753	3,912	6,737	7,565	8,742	8,552	10,371	86,028
San Diego, City of	1,322,737	87,550	99,817	112,138	104,323	119,467	145,343	165,212	124,699	2,272,256
San Dieguito Irrigation District	37,309	2,481	1,689	2,878	14	2,243	4,911	4,215	4,817	50,548
Santa Fe Irrigation District	23,959	2,481	1,689	2,878	14	3,008	6,740	5,139	6,716	52,624
Valley Center M. W. D.	26,907	7,676	10,372	11,423	14,372	15,143	20,624	16,531	20,345	142,415
Yelma M. W. D.	1,923	2,163	1,983	2,140	2,018	2,342	2,370	2,025	2,836	19,904
Total Sales to Agencies	2,438,493	292,532	233,270	246,701	245,613	277,244	303,607	340,564	328,776	4,666,809
Total Sales to Others	1,285	32	18	5	65	208	233	6,776	8,942	17,604
Total to Authority Storage	+125,196	+4,372	+2,462	+29,962	+599	+14,348	+19,218	+13,590	+15,683	+216,250
Total from Authority Storage	-83,932	-3,742	-8,919	-12,371	-2,454	-8,127	-15,732	-16,781	-15,561	-176,719
Total to Metropolitan Storage	+85,256	+17,178	+20,273	+10,033	+24,230	+19,995	+3,900	0	0	+120,929
Total from Metropolitan Storage	-17,561	-14,099	-18,879	-13,249	-18,693	-21,039	-11,496	-1,898	0	-116,909
Total Flow in Authority System	2,479,707	296,273	278,227	231,992	249,228	282,638	349,730	342,751	337,880	4,127,955

Rate of Flow (c.f.s.)

To Agencies and Others	181.1	279.5	321.4	340.8	339.4	383.2	487.4	479.8	466.5	242.1
To Authority Storage	+9.3	+6.9	+2.4	+28.9	+0.7	+19.8	+26.3	+18.6	+21.7	+11.2
From Authority Storage	-6.9	-3.2	-12.3	-17.1	-3.4	-11.2	-23.2	-23.2	-21.5	-9.2
To Metropolitan Storage	+1.9	+23.7	+27.9	+13.9	+32.4	+27.6	+5.4	0	0	+6.3
From Metropolitan Storage	-1.3	-19.4	-26.0	-18.4	-25.8	-29.0	-15.8	+2.5	0	-6.9
Flow in Authority System	184.1	284.9	314.4	318.1	344.3	390.4	481.8	472.7	466.7	245.4

(1) The operation of the First Aqueduct was formally initiated on November 24, 1947. For sales in intervening years, see previous reports.

Table 7
WATER PRODUCTION WITHIN AUTHORITY AGENCIES—FISCAL YEARS 1964-65 to 1973-74
(All figures in acre feet)

Member Agencies	From Local and Authority Supplies									
	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71	1971-72	1972-73	1973-74
Buena Colorado M. W. D.	13,022	13,616	17,551	14,400	13,341	15,513	15,511	17,376	15,839	18,396
Carlsbad M. W. D.	6,295	6,347	6,350	6,944	7,002	7,960	8,780	9,373	8,907	10,079
Del Mar, City of	679	650	652	707	722	808	855	944	850	942
De Luz Heights M. W. D.	0	0	0	0	0	0	0	0	9*	99
Escondido, City of	4,275	4,556	4,582	5,569	5,831	6,439	8,911	20,289	16,911	18,749
Fallbrook Public Utility District	10,716	11,016	9,872	11,079	10,072	11,398	11,221	13,067	10,790	12,198
Helix Water District	23,069	26,936	35,672	28,278	24,504	31,802	31,684	32,583	32,141	35,466
National City and South Bay L.D.	14,143	14,614	14,391	13,783	13,904	17,715	18,812	21,326	18,614	20,093
Oceanside, City of	7,424	7,447	7,697	8,688	8,808	10,134	11,510	13,009	12,570	14,529
Olivenshain M. W. D.	717	910	803	1,111	1,189	1,823	1,630	2,275	2,263	2,837
Otay M. W. D.	6,043	6,679	8,268	9,316	8,471	9,037	9,760	10,666	9,643	12,043
Poway M. W. D.	2,166	3,317	3,423	3,937	3,882	4,373	4,648	5,066	5,428	7,033
Rainbow M. W. D.	12,629	14,140	13,123	15,319	14,358	18,347	18,910	21,987	18,542	21,563
Ranoma M. W. D.	839	1,019	1,020	1,377	1,399	1,789	1,932	2,319	2,763	3,723
Rincon del Diablo M. W. D.	11,943	12,613	11,707	12,813	12,703	14,642	13,899	3,076	2,396	3,343
Rio San Diego M. W. D.	4,380	4,988	4,888	5,810	6,018	6,956	7,705	9,015	8,681	10,323
San Diego, City of:										
Inside City	95,032	102,174	104,894	112,841	113,421	122,630	130,290	141,815	135,472	123,672
Outside City (not in Authority)	4,922	3,326	3,432	3,780	5,396	6,147	6,036	6,548	6,216	6,398
San Dieguito Irrigation District	4,937	3,929	4,022	4,329	3,841	4,307	4,636	3,238	5,088	3,677
Santa Fe Irrigation District	3,725	3,968	3,822	5,344	5,934	6,358	7,175	6,294	7,931	7,931
Valley Center M. W. D.	5,231	7,233	7,076	10,372	11,423	14,409	13,146	18,031	16,312	20,663
Yelma M. W. D.	9,288*	8,142	6,070	7,929	7,972	9,927	8,626	4,613	3,471	4,625
Total	243,893	258,720	256,044	288,170	284,182	322,589	336,043	367,943	342,319	399,502

*Use of Colorado River water began this year. All other agencies' use began prior to 1964-65. See previous reports.

Table 8
WATER PRODUCTION OF AUTHORITY AGENCIES - FISCAL YEAR 1973-74

Member Agencies	TOTAL WATER PRODUCTION			SOURCE OF WATER		
	ac.	ac. ft. / yr.	ac. ft. / yr.	Local Supply	Authority Supply	Percent
	m. g. d.	ac. ft. / yr.	ac. ft. / yr.	Amount	Amount	Percent
Bueno Colorado M. W. D.	16.42	25.42	18,396.3	6,873.0	11,523.3	36.3
Carlsbad M. W. D.	8.95	13.85	10,028.9	0	10,028.9	0
Del Mar, City of	0.84	1.30	941.6	0	941.6	0
De Luz Heights M. W. D.	0.09	0.14	99.2	0	99.2	0
Escondido, City of	16.74	25.90	18,749.1	5,907.8	12,841.3	31.5
Fallbrook Public Utility District	10.89	16.85	12,198.5	0	12,198.5	0
Helix Water District	31.68	48.89	35,466.3	7,607.0	27,859.3	21.4
National City and South Bay I. D.	17.94	27.76	20,095.0	4,546.0	15,549.0	22.6
Oceanside, City of	12.98	20.08	14,539.0	2.4	14,536.6	0
Olivenhain M. W. D.	2.55	3.93	2,857.4	0	2,857.4	0
Otay M. W. D.	10.75	16.63	12,042.7	0	12,042.7	0
Poway M. W. D.	6.30	9.74	7,053.0	0	7,053.0	0
Rainbow M. W. D.	19.25	29.79	21,565.0	0	21,565.0	0
Ramona M. W. D.	3.32	5.14	3,722.8	99.1	3,623.7	2.7
Rincon del Diabolo M. W. D.	2.89	4.62	3,344.5	0	3,344.5	0
Rio San Diego M. W. D.	9.39	14.54	10,523.5	152.4	10,371.1	1.4
San Diego, City of:						
Inside City	137.19	212.26	153,671.7	8,883.2	144,788.5	5.8
Outside City (Not in Authority)	5.63	8.71	6,308.5	6,308.5	0	100.0
San Diego Irrigation District	5.07	7.84	5,676.6	881.0	4,795.6	15.5
Santa Fe Irrigation District	7.08	10.95	7,930.7	1,208.5	6,722.2	15.2
Valley Center M. W. D.	18.45	28.54	20,662.8	33.6	20,629.2	0.2
Yuima M. W. D.	4.13	6.39	4,628.7	1,692.6	2,936.1	36.6
Total	345.61	539.39	390,501.8	43,997.1	346,504.7	11.3

Note: This table is a compilation of data furnished by member agencies.
Figures include losses in transmission and distribution systems but not in conservation reservoirs.

Table 9
UNIT WATER PRODUCTION - PER ACRE AND PER CAPITA 1973-74

Member Agencies	Gross Area (2)	Total Production of Water	Estimated Area Served by Water System	Water		Estimated Population	Water Production Per Capita
				acres	ac. ft. / acre / yr.		
				no. ft.	ac. ft. / cap. / yr.		
Bueno Colorado M. W. D.	48,868	18,396.3	35,100	0.52	54,700	0.34	
Carlsbad M. W. D.	20,215	10,028.9	16,950	0.59	20,800	0.48	
Del Mar, City of	1,082	941.6	1,080	0.87	4,900	0.19	
De Luz Heights M. W. D.	11,830	99.2	300	0.33	150	0.66	
Escondido, City of	12,783	18,749.1	9,620	1.95	47,000	0.40	
Fallbrook Public Utility District	15,759	12,198.5	8,550	1.43	14,050	0.87	
Helix Water District	31,495	35,466.3	29,200	1.21	185,600	0.19	
National City, City of	5,419	5,116.0	3,990	1.31	43,950	0.12	
Oceanside, City of	24,573	14,539.0	13,500	1.08	52,700	0.28	
Olivenhain M. W. D.	27,498	2,857.4	2,800	1.02	10,000	0.29	
Otay M. W. D.	63,895	12,042.7	28,260	0.43	33,000	0.36	
Poway M. W. D.	22,889	7,053.0	9,800	0.72	25,300	0.28	
Rainbow M. W. D.	47,099	21,565.0	11,800	1.83	5,000	4.31	
Ramona M. W. D.	47,578	3,722.8	7,900	0.47	8,000	0.47	
Rincon del Diabolo M. W. D.	17,372	3,344.5	13,500	0.25	21,850	0.15	
Rio San Diego M. W. D.	54,213	10,523.5	27,000	0.39	70,400	0.15	
San Diego, City of	202,704	153,671.7	108,000	1.45	777,300	0.20	
San Diego Irrigation District	5,597	5,676.6	5,000	1.14	24,800	0.23	
Santa Fe Irrigation District	10,197	7,930.7	9,200	0.86	10,000	0.79	
South Bay Irrigation District	15,571	14,979.0	9,800	1.53	86,050	0.17	
Valley Center M. W. D.	62,122	20,662.8	16,000	1.29	10,500	1.97	
Yuima M. W. D.	12,813	4,628.7	4,000	1.16	1,250	3.70	
Total and Average	761,482	384,193.3	369,260	1.04	1,507,300	0.25	

(1) Does not include production by City of San Diego for areas outside City (not in Authority).

(2) Does not include overlapping area as shown in Table 1.

SAN DIEGO COUNTY WATER AUTHORITY

Table 10
AGRICULTURAL USE OF WATER - FISCAL YEAR 1973-74

Member Agencies	Total Water Production ac. ft.	Water Used for Agricultural Purposes				Percent of Agricultural Water to Total Production	
		From Local Supply		From Authority			Total ac. ft.
		ac. ft.	Percent	ac. ft.	Percent		
Bueno Colorado M. W. D.	18,396.3	2,701.6	41.4	3,827.8	58.6	6,529.4	35.5
Carlsbad M. W. D.	10,028.9	0	0	4,139.5	100.0	4,139.5	41.3
Del Mar, City of	941.6	(a)	-	(b)	-	(b)	(b)
De Luz Heights M. W. D.	99.2	0	0	86.1	100.0	86.1	86.8
Escondido, City of	18,749.1	2,033.6	33.4	4,060.2	66.6	6,093.8	32.5
Fallbrook Public Utility District ..	12,198.5	0	0	9,185.8	100.0	9,185.8	75.3
Helix Water District	35,466.3	366.2	25.7	1,056.1	74.3	1,422.3	4.0
National City & South Bay I. D.	20,093.0	109.5	22.1	386.3	77.9	495.8	2.5
Oceanside, City of	14,539.0	1.3	0	2,741.6	100.0	2,742.9	18.9
Olivenshain M. W. D.	2,857.4	0	0	1,509.9	100.0	1,509.9	52.8
Otay M. W. D.	12,042.7	0	0	5,419.4	100.0	5,419.4	45.0
Poway M. W. D.	7,053.0	0	0	1,668.3	100.0	1,668.3	23.7
Rainbow M. W. D.	21,565.0	0	0	20,131.0	100.0	20,131.0	93.4
Ranoma M. W. D.	3,722.8	0	0	1,842.8	100.0	1,842.8	49.5
Rincon del Diablo M. W. D.	3,344.5	0	0	1,363.7	100.0	1,363.7	40.8
Rio San Diego M. W. D.	10,523.5	0	0	153.5	100.0	153.5	1.5
San Diego, City of	153,671.7	75.7	9.7	707.8	90.3	783.5	0.5
San Diego Irrigation District ...	5,676.6	310.2	18.3	1,598.1	83.7	1,908.3	33.6
Santa Fe Irrigation District	7,930.7	261.8	15.1	1,467.2	84.9	1,729.0	21.8
Valley Center M. W. D.	20,662.8	26.5	0.1	18,354.4	99.9	18,380.9	89.0
Yuima M. W. D.	4,628.7	1,647.4	36.6	2,858.5	63.4	4,505.9	97.3
Total	399,501.8	7,532.8	8.4	82,555.0	91.6	90,091.8	23.1

(a) Included in City of San Diego.

TABLES

Table 11
AUTHORITY STORAGE IN SAN VICENTE RESERVOIR
(Fiscal Year 1973-74)

Member Agencies	Total Quantity in Storage 7/1/73 ac. ft.	Placed Into Storage During Fiscal Year ac. ft.	Withdrawn During Fiscal Year		Total Quantity in Storage 6/30/74 ac. ft.
			By Delivery ac. ft.	By Evaporation ac. ft.	
			ac. ft.	ac. ft.	
Bueno Colorado M. W. D.	1,643.2	1,005.9	1,095.2	73.0	1,450.9
Carlsbad M. W. D.	1,341.1	1,121.9	916.2	65.9	1,450.9
Del Mar, City of	0	0	0	0	0
De Luz Heights M. W. D.	0	0	0	0	0
Escondido, City of	0	0	0	0	0
Fallbrook Public Utility District	2,636.4	2,275.5	1,815.7	134.4	2,961.8
Helix Water District	1,622.0	0	1,580.5	41.5	0
National City & South Bay I. D.	0	0	0	0	0
Oceanside, City of	626.9	523.3	428.2	30.9	691.1
Olivenshain M. W. D.	663.0	816.5	454.9	37.3	987.3
Otay M. W. D.	1,801.7	1,499.1	1,238.8	87.4	1,974.6
Poway M. W. D.	23.5	0	23.1	0.4	0
Rainbow M. W. D.	4,417.5	3,267.4	3,032.6	209.5	4,442.8
Ranoma M. W. D.	352.0	301.1	240.6	17.5	395.0
Rincon del Diablo M. W. D.	864.1	1,070.7	912.7	34.7	987.4
Rio San Diego M. W. D.	934.9	721.3	624.1	44.8	987.3
San Diego, City of	0	0	0	0	0
San Diego Irrigation District	0	0	0	0	0
Santa Fe Irrigation District	200.6	337.0	129.8	12.8	395.0
Valley Center M. W. D.	2,705.0	2,229.4	1,840.5	132.0	2,961.9
Yuima M. W. D.	572.2	427.1	380.0	26.9	592.4
Total	20,404.1	15,586.2	14,712.9	949.0	20,338.4

Table 12
CHEMICAL CHARACTER OF NATURAL COLORADO RIVER WATER
AT WEST PORTAL OF SAN JACINTO TUNNEL

Year Ending June 30, 1974

Samples Taken at Entrance to San Diego Aqueduct by M. W. D.
and Analyzed by District Laboratory

Month	Total Hardness as P. P. M. CaCO ₃	Non Car- bonate Hardness as P. P. M. CaCO ₃	Alkalinity as P. P. M. CaCO ₃		Magnesium as P. P. M.	Hydrogen Ion Concen- tration	Temperature When Sampled °F
			Total	Phenolphthalein	of Mg.		
July	305	210	95	2	31.0	8.5	79
August	311	205	106	3	29.5	8.5	81
September	331	215	116	0	30.0	8.2	77
October	331	216	115	0	32.0	8.3	74
November	333	209	114	4	30.0	8.5	72
December	337	214	123	1	31.0	8.4	64
January	336	210	126	0	30.0	8.3	56
February	334	210	124	1	31.5	8.5	53
March	338	211	127	2	30.5	8.4	54
April	338	209	127	3	30.0	8.5	60
May	339	213	126	3	29.5	8.5	69
June	341	214	127	0	29.5	8.3	70
Average	330	211	119	2	30.5	8.4	67
Maximum	341	216	127	4	32.0	8.5	81
Minimum	305	205	95	0	29.5	8.2	53

Table 13
ANALYSIS OF COLORADO RIVER AQUEDUCT WATER
TAKEN AT WEST PORTAL OF SAN JACINTO TUNNEL
For Year Ending June 30, 1974

Constituent	Symbol	ANALYSIS	
		Average	Minimum
Silica	SiO ₂	7.3 ppm	9.7 ppm
Iron	Fe	0.07 ppm	0.12 ppm
Calcium	Ca	82 ppm	88 ppm
Magnesium	Mg	30.5 ppm	32 ppm
Sodium	Na	105 ppm	108 ppm
Potassium	K	5 ppm	5 ppm
Carbonate	CO ₃	2 ppm	5 ppm
Bicarbonate	HCO ₃	140 ppm	155 ppm
Sulfate	SO ₄	305 ppm	309 ppm
Chloride	Cl	91 ppm	94 ppm
Nitrate	NO ₃	0.5 ppm	0.8 ppm
Fluoride	F	0.4 ppm	0.45 ppm
Total Dissolved Solids		699 ppm	713 ppm
Hardness as CaCO ₃			
Total		330 ppm	339 ppm
Carbonate		119 ppm	127 ppm
Noncarbonate		211 ppm	216 ppm
Alkalinity - Phenolphthalein		2 ppm	4 ppm
Alkalinity - Total		119 ppm	127 ppm
Free Carbon Dioxide	CO ₂	1 ppm	1 ppm
Hydrogen Ion Concentration	pH	8.4	8.5
Electrical Conductivity	ECx10 ⁶ at 25°C	1,100	1,150
Temperature	°F	67	81

Table 14
ALLOCATION OF RIGHT TO PURCHASE AUTHORITY WATER
As of June 30, 1974

Member Agencies	Amount Paid by Taxes to 6/30/74	Amount for Service Connections to 6/30/74	Total Amount Paid by Each Member Agency to 6/30/74	Amount Remaining to be Paid Under Terms of Annexation	Total Contributions Paid and Contracted for	Percentage of Auth. Supply	Allocation Equivalent Flow c.f.s.
Buena Colorado M. W. D.	\$ 1,281,822	56,654	1,438,486	0	1,438,486	2.28	27.09
Carlsbad M. W. D.	954,638	7,931	962,569	0	962,569	2.29	18.17
Del Mar, City of	284,681	---	284,681	0	284,681	0.63	5.37
De Luz Heights M. W. D.	16,422	---	16,422	5,116	21,538	0.05	0.41
Escondido, City of	908,931	9,253	918,204	0	918,204	2.09	17.26
Fallbrook P. U. D.	378,985	67,773	445,858	0	445,858	1.02	8.43
Helix Water District	4,678,951	28,965	4,707,856	0	4,707,856	10.74	88.71
National City, City of	939,397	---	939,397	0	939,397	2.14	17.68
Oceanside, City of	1,162,958	59,109	1,222,067	0	1,222,067	2.79	23.05
Olivenshain M. W. D.	202,569	22,660	225,229	3,054	228,283	0.52	4.30
Otay M. W. D.	606,314	96,019	702,333	0	702,333	1.69	13.22
Poway M. W. D.	357,197	27,307	384,504	0	384,504	0.88	7.27
Rainbow M. W. D.	362,534	147,461	509,995	3,192	513,187	1.17	9.66
Ranoma M. W. D.	244,934	3,378	248,312	18,094	266,316	0.61	5.04
Rincon del Diabolo M. W. D.	603,031	14,527	617,558	0	617,558	1.41	11.65
Rio San Diego M. W. D.	983,363	45,244	1,028,607	1,845	1,030,452	2.35	19.41
San Diego, City of	24,697,228	84,928	24,782,134	0	24,782,134	56.53	466.94
San Diegoito I. D.	574,068	5,758	579,824	0	579,824	1.32	10.69
Santa Fe I. D.	531,254	8,129	539,383	0	539,383	1.28	10.97
South Bay I. D.	2,666,036	594	2,666,630	0	2,666,630	6.08	50.22
Valley Center M. W. D.	315,124	128,973	444,097	1,296	445,493	1.02	8.42
Yulma M. W. D.	104,497	11,900	116,397	3,788	120,185	0.27	2.23
Total Authority	\$42,974,089	826,490	43,800,579	36,298	43,836,977	100.00	**826.00

* Figures do not total due to omission of cents.
** Maximum capacity as of June 30, 1974.

Table 15
SAN DIEGO COUNTY WATER AUTHORITY
Statement of Tax Assessments and Collections
Fiscal Years 1945-46 to 1973-74

Member Agencies	Tax Assessments to Date	Adj. to Tax Assessments	Tax Collections	Interest & Penalties	Tax on Options	Receipts In Lieu of Taxes	Misc. Tax Sales	Less Refunds	Net Total Collections	Uncollected 6/30/74
Fallbrook P. U. D.	\$ 375,209	298	375,139	1,325	0	2,429	42	62	378,063	2,550
Helix W. D.	4,674,668	1,739	4,663,819	12,151	89	4,920	693	733	4,678,931	14,587
City of National City	931,857	2,167	931,050	2,039	8	6,828	85	615	929,397	2,974
City of Oceanside	1,162,974	1,436	1,154,216	2,623	5	2,601	95	562	1,162,938	6,194
City of San Diego	24,353,373	17,627	15,281,908	28,994	42	9,428,746	2,424	44,789	24,897,276	10,879
Ranoma M. W. D.	241,394	634	238,360	1,129	---	3,490	58	14	244,934	3,668
Santa Fe I. D.	546,382	1,288	543,167	2,029	821	2,892	1,093	748	551,254	2,704
San Diegoito I. D.	569,279	65	567,412	1,418	3	5,426	127	321	574,068	1,882
City of Escondido	909,246	1,830	906,655	2,374	---	28	28	136	908,931	4,521
South Bay I. D.	2,670,246	1,848	2,659,610	4,013	0	15,286	142	13,028	2,666,036	12,444
Rainbow M. W. D.	345,263	306	337,034	1,830	---	23,679	0	31	362,534	8,765
Poway M. W. D.	361,413	80	354,334	2,872	---	15	8	34	357,197	7,139
Buena Colorado M. W. D.	1,373,983	1,724	1,369,749	4,442	1	10,892	121	285	1,381,832	8,068
Rincon del Diabolo M. W. D.	545,163	1,113	542,540	1,731	---	58,860	1	43	603,031	3,736
Carlsbad M. W. D.	926,788	<658>	919,617	2,126	---	20,273	10	371	934,658	6,512
Valley Center M. W. D.	363,681	8,419	312,087	2,014	---	1,011	28	15	315,134	2,013
Rio San Diego M. W. D.	986,821	3,224	977,644	4,784	0	878	121	274	983,363	10,201
Otay M. W. D.	610,330	235	604,594	1,940	---	1,250	45	176	606,314	6,267
Olivenshain M. W. D.	296,702	<232>	290,182	1,207	---	50	---	50	292,569	6,287
City of Del Mar	283,088	2,064	283,326	868	---	320	1	44	284,681	2,337
Yulma M. W. D.	183,098	288	182,812	231	---	1,590	---	47	184,497	1,173
De Luz M. W. D.	15,916	4	15,375	44	---	1,030	---	0	16,422	541
Total Member Agencies	\$42,899,239	43,409	33,339,733	82,224	972	9,698,315	5,143	62,416	42,974,089	125,502
Withdrawn Areas	4,189	29	4,199	11	0	156	2	5	4,294	---
Grand Total*	\$42,702,429	43,439	33,343,932	82,235	972	9,698,991	5,143	62,422	42,978,484	125,502

* Figures do not total due to omission of cents.

Table 16
ASSESSED VALUATIONS AND TAX RATES
Fiscal Years 1945-46 to 1973-74

Fiscal Year	Secured Property		Public Utilities		Unsecured Property		Total	Tax Rate per \$100	
	Year's Taxes	Percentage Collected	Year's Taxes	Percentage Collected	Year's Taxes	Percentage Collected		Secured	Unsecured
1945-46	\$ 212,082,975	28,253,700	29,960,130	270,296,805	0.04	-			
1946-47	208,715,150*	29,433,450	30,065,910	268,814,510	0.04	0.04			
1947-48	233,579,990	32,740,650	40,977,850	307,298,520**	0.14	0.04			
1948-49	254,237,570	37,482,020	47,177,300	338,886,890	0.14	0.14			
1949-50	290,351,975	42,429,140	45,743,200	378,524,215	0.10	0.14			
1950-51	306,104,930	43,595,730	44,717,740	394,418,400	0.10	0.10			
1951-52	344,620,030	48,452,940	50,904,035	443,977,005	0.10	0.10			
1952-53	382,948,660	53,208,220	63,996,330	500,153,410	0.12	0.10			
1953-54	490,709,350	63,092,050	69,147,150	622,948,550	0.10	0.12			
1954-55	546,272,880	69,243,550	79,629,790	695,146,220	0.10	0.10			
1955-56	627,062,960	87,485,390	79,936,450	794,484,800	0.09	0.10			
1956-57	650,824,400	101,224,260	97,950,800	879,999,460	0.09	0.09			
1957-58	761,088,330	111,151,890	128,785,440	1,001,025,660	0.09	0.09			
1958-59	865,283,080	128,479,290	128,124,720	1,121,587,090	0.10	0.09			
1959-60	979,491,050	145,317,290	134,846,730	1,259,655,070	0.11	0.10			
1960-61	1,116,723,830	165,666,720	159,954,740	1,442,343,290	0.11	0.11			
1961-62	1,220,810,650	191,276,650	155,149,890	1,567,237,190	0.11	0.11			
1962-63	1,272,506,330	201,245,370	154,989,440	1,628,741,140	0.11	0.11			
1963-64	1,340,197,170	209,793,780	159,714,930	1,709,705,880	0.11	0.11			
1964-65	1,423,375,590	213,352,470	151,686,520	1,788,414,580	0.11	0.11			
1965-66	1,511,967,750	212,605,040	155,417,220	1,879,990,010	0.11	0.11			
1966-67	1,567,290,460	212,223,550	147,740,730	1,927,254,740	0.11	0.11			
1967-68	1,735,209,870	209,136,160	178,641,120	2,122,987,150	0.10	0.11			
1968-69	1,876,236,060	208,018,700	197,139,600	2,282,094,360	0.09	0.10			
1969-70	2,063,618,582	210,839,100	276,951,409	2,312,409,091	0.09	0.09			
1970-71	2,348,151,943	216,378,300	276,932,717	2,641,462,960	0.09	0.09			
1971-72	2,755,734,087	213,191,301	306,695,099	3,075,533,487	0.10	0.09			
1972-73	3,061,010,163	225,224,650	347,857,938	3,634,092,751	0.11	0.10			
1973-74	3,481,734,238	239,346,070	393,300,174	4,114,380,482	0.11	0.11			

*City of Coronado secured assessed valuations not included in this or subsequent tax levies by the Authority, having withdrawn from the Authority prior to 1946-47.

**City of Coronado not included in this or subsequent total valuation.

Table 17
TAX LEVIES AND TAX COLLECTIONS BY FISCAL YEAR
Fiscal Years 1945-46 to 1973-74

Fiscal Year	Tax Levy	Collection of Current Year's Taxes		Percentage of Levy Collected During Fiscal Year	Adjustments to Prior Year's Levies		Collection of Prior Year's Taxes		Total Tax Collections	Ratio of Accumulated Delinquent Taxes to Tax Levy	
		Fiscal Year	Fiscal Year		Year's	Levies	During Fiscal Year	During Fiscal Year		Accumulated Delinquent Taxes	Accumulated Delinquent Tax Levy
1945-46	\$ 96,131	94,656	98.47%	-	-	-	1,090	94,656	1,474	1.57%	
1946-47	107,888	105,713	98.09	-	-	1,090	1,852	106,844	2,439	2.26	
1947-48	389,591	381,563	97.94	-	-	1,852	5,916	385,445	8,585	2.20	
1948-49	474,320	459,594	96.94	-	-	5,916	13,342	465,420	17,685	3.73	
1949-50	601,112	592,732	97.91	329	329	13,342	8,217	600,074	13,052	3.25	
1950-51	397,970	390,274	98.07	373	373	8,217	7,699	399,492	12,904	3.24	
1951-52	450,405	441,242	97.97	978	978	7,699	12,567	445,941	15,346	3.40	
1952-53	594,693	585,417	98.46	(1,140)	(1,140)	12,567	9,942	597,985	10,824	1.82	
1953-54	652,335	640,239	98.15	4,213	4,213	9,942	12,638	650,181	17,191	2.62	
1954-55	709,678	695,200	97.96	1,295	1,295	12,638	600,874	707,838	20,326	2.86	
1955-56	803,373	788,734	97.41	(5,999)	(5,999)	13,140	13,056	800,874	20,726	2.59	
1956-57	874,774	861,461	98.48	576	576	13,056	13,890	874,517	21,560	2.46	
1957-58	965,096	946,445	98.08	858	858	13,890	13,347	959,335	28,189	2.92	
1958-59	1,176,885	1,157,265	98.47	-	-	13,347	16,647	1,170,613	36,462	3.09	
1959-60	1,436,370	1,408,277	98.05	(5,274)	(5,274)	16,647	1,424,825	1,424,825	42,533	2.97	
1960-61	1,624,733	1,586,369	97.63	(8,220)	(8,220)	21,561*	1,607,671	1,607,671	50,874	3.15	
1961-62	1,783,785	1,718,575	97.44	(5,276)	(5,276)	31,477	1,750,653	1,750,653	62,330	3.54	
1962-63	1,816,449	1,775,932	97.77	(3,688)	(3,688)	38,134	1,814,066	1,814,066	61,623	3.37	
1963-64	1,910,019	1,862,973	97.54	(268)	(268)	38,525	1,899,799	1,899,799	70,975	3.72	
1964-65	2,000,967	1,948,853	97.44	(6,588)	(6,588)	42,596	1,991,450	1,991,450	73,003	3.66	
1965-66	2,101,023	2,039,032	96.76	2,303	2,303	44,784	2,077,816	2,077,816	98,714	4.69	
1966-67	2,154,994	2,090,637	97.01	(7,164)	(7,164)	54,333	2,144,970	2,144,970	101,573	4.73	
1967-68	2,175,376	2,129,996	97.92	(301)	(301)	64,473	2,199,470	2,199,470	103,963	4.77	
1968-69	2,110,913	2,103,601	99.65	-	-	55,253	2,158,554	2,158,554	34,136	1.62	
1969-70	2,298,574	2,204,128	95.89	-	-	24,018	2,228,146	2,228,146	103,963	4.52	
1970-71	2,430,123	2,408,889	98.32	38,500	38,500	104,032	2,512,932	2,512,932	79,655	3.25	
1971-72	3,084,869	3,058,713	99.15	27,045	27,045	32,926	3,091,639	3,091,639	99,930	3.24	
1972-73	3,790,191	3,742,715	98.77	484	484	45,314	3,789,029	3,789,029	101,586	2.68	
1973-74	4,004,024	3,941,152	98.43	4,891	4,891	43,846	3,984,999	3,984,999	125,502	3.13	

Table 18
SAN DIEGO COUNTY WATER AUTHORITY
ANNEXATION CHARGES, ASSESSMENTS AND BALANCES

Area	Date of Annexation	Amount of Annexation Charge	Period of Special Assessments		Special Assessments to 6/30/73	Fiscal Year 1973-74		Remaining Balance of Annexation Charges 6/30/74
			First Year	Last Year		Special Assessments	Tax Rate \$/100	
Annexation Charges Completed...		\$ 745,230						
Annexation Charges Outstanding:								
Del Mar, City of	11-23-62	121,700	1963-64	1972-73	131,500	-0-	-0-	-0-
De Las Heights M. W. D.	6-28-67	7,400	1968-69	1977-78	3,834	647	14¢	2,919
No. 1 Annex of 1969	10-28-69	4,200	1970-71	1979-80	1,632	372	22¢	2,196
Coliverhain M. W. D.								
No. 1 Annex of 1965	2-11-65	14,000	1966-67	1975-76	10,375	1,541	14¢	1,481
No. 4 Annex of 1967	11-13-67	3,500	1968-69	1977-78	2,026	301	22¢	1,173
Rainbow M. W. D.								
No. 3 Annex of 1967	12-11-67	5,100	1968-69	1977-78	5,076	882	18¢	3,102
No. 3 Annex of 1973	11-22-73	2,600	1973-74	1973-74	-	2,600	-0-	-0-
Rancho M. W. D.								
No. 4 Annex of 1967	11-30-67	6,100	1968-69	1977-78	3,423	379	16¢	2,056
No. 5 Annex of 1972	5-17-72	18,200	1971-72	1982-83	500	1,892	11¢	15,007
Rio San Diego M. W. D.								
No. 4 Annex of 1970	8-03-70	3,100	1971-72	1980-81	1,040	215	16¢	1,845
Santa Fe I. D.								
No. 2 Annex of 1973	4-11-73	2,300	1973-73	1973-74	500	1,500	-0-	-0-
Valley Center M. W. D.								
No. 2 Annex of 1967	12-04-67	1,550	1968-69	1977-78	569	138	46¢	543
No. 3 Annex of 1967	12-04-67	2,750	1968-69	1977-78	1,663	235	14¢	832
No. 4 Annex of 1973	11-8-73	1,600	1973-73	1973-74	500	1,100	-0-	-0-
Yuma M. W. D.								
No. 1 Annex of 1967	12-16-67	40,750	1968-69	1973-74	27,689	3,061	-0-	-0-
No. 1 Annex of 1967	11-21-67	6,000	1968-69	1977-78	3,125	493	16¢	2,380
No. 2 Annex of 1969	11-03-69	2,800	1970-71	1979-80	1,136	236	56¢	1,408
Total		\$1,605,589			833,062	16,100		36,308

Table 19
ASSESSED VALUATIONS AND TAX RATES OF THE
METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Fiscal Year	Area (acres)	Assessed Valuation Total (1)	Tax Rate	
			Per \$100 Secured	Per \$100 Unsecured
1929-30	-	\$ 2,439,826,920	0.04	0.00
1930-31	-	2,431,684,250	.03	.04
1931-32	-	2,382,184,445	.03	.03
1932-33	-	1,936,051,180	.04	.03
1933-34	-	1,654,403,890	.04	.04
1934-35	-	1,587,147,565	.10	.04
1935-36	-	1,783,531,620	.20	.10
1936-37	-	1,789,160,685	.37	.20
1937-38	-	1,827,765,725	.40	.37
1938-39	-	1,896,966,255	.40	.40
1939-40	-	1,910,152,190	.42	.40
1940-41	389,588	1,841,248,450	.49	.42
1941-42	399,875	1,900,599,934	.48	.49
1942-43	400,614	2,001,924,735	.48	.48
1943-44	401,190	2,005,496,430	.48	.48
1944-45	401,536	2,109,192,795	.48	.48
1945-46	402,779	2,159,731,425	.50	.48
1946-47	501,425	2,413,186,570	.48	.50
1947-48	546,573	2,443,212,822	.35	.48
1948-49	578,368	3,883,081,225	.34	.35
1949-50	585,184	4,181,812,855	.34	.34
1950-51	721,850	4,281,519,725	.31	.34
1951-52	995,130	4,674,664,940	.30	.31
1952-53	1,120,448	5,372,498,515	.28	.30
1953-54	1,368,038	6,015,691,980	.25	.28
1954-55	1,793,651	6,548,392,114	.23	.25
1955-56	1,876,256	8,514,868,335	.21	.23
1956-57	1,932,205	9,674,000,560	.19	.21
1957-58	2,046,189	11,235,996,510	.18	.19
1958-59	2,128,333	12,070,838,070	.18	.18
1959-60	2,171,290	12,714,205,470	.17	.18
1960-61	2,544,969	13,737,971,925	.16	.17
1961-62	2,647,014	14,803,202,587	.15	.16
1962-63	2,797,946	15,699,681,030	.14	.15
1963-64	2,825,396	17,261,412,395	.14	.14
1964-65	2,882,144	17,757,246,740	.14	.14
1965-66	2,890,266	19,143,157,788	.14	.14
1966-67	2,901,421	20,979,150,165	.14	.14
1967-68	3,061,885	22,732,157,500	.14	.14
1968-69	3,067,896	24,016,568,274	.16	.14
1969-70	3,072,038	25,572,510,561	.17	.16
1970-71	3,075,616	27,605,064,302	.17	.17
1971-72	3,093,303	29,023,413,462	.17	.17
1972-73	3,126,893	31,011,520,641	.15	.17
1973-74	3,127,680	32,838,476,378	.14	.15
1974-75	(3)	35,941,961,265	.14	.14

(1) Includes secured, unsecured, and public utility valuations.

(2) First year in which Authority assessed valuation was included in District's assessed valuation.

(3) Data for 1974-75 were available before completion of report and are included for convenience of reader.

SAN DIEGO COUNTY WATER AUTHORITY

Table 20
METROPOLITAN WATER DISTRICT ANNEXATION CHARGES
AND BALANCES ON AUTHORITY AREAS

Member Agencies	Date of Annexation	Amount of Annexation Charge	Remaining Balance 6/30/74
Annexation Charges Completed	---	\$ 146,650	\$ ---
Annexation Charges Outstanding			
Chula Vista, City of			
Fallbrook Public Utility District			
Lakeside Irrigation District			
Helix Water District	12-17-68	13,045,000	1,302,127
National City, City of			
Oceanside, City of			
San Diego, City of			
Buena Colorado M. W. D.	6-11-54	1,072,720	379,801
Carlisle M. W. D.	6-16-54	548,100	192,288
Del Mar, City of	11-23-62	611,750	365,117
De Luz M. W. D.	6-28-67	2,002,000	* 2,432,375
No. 1 Annexation of 1969	10-15-69	312,000	* 300,305
Econohito, City of	10- 9-59	366,000	86,173
Fallbrook Public Utility District			
No. 1 Annexation of 1959	9- 1-59	24,600	5,043
No. 2 Annexation of 1958	11-24-58	50,400	24,847
Fallbrook Community Air Park	12-22-69	59,800	* 68,832
Helix Water District			
Crest P. U. D. Annexation	12-13-68	16,500	1,547
El Cajon Dry Island Annexation	12-20-54	227,450	166,224
Helix-Watson Ranch Annexation	2-20-59	8,730	4,576
Helix-Sunny Slope Hts. Annexation	9-17-59	26,250	20,328
Girvinham M. W. D.	7-25-69	83,880	45,211
No. 1 Annexation of 1963	3-11-63	312,329	375,423
No. 4 Annexation of 1967	11-13-67	74,000	* 83,732
Gray M. W. D.	10-26-56	273,000	112,142
No. 3 Annexation of 1969	10-20-69	93,100	53,542
Peasey M. W. D.	6-21-54	91,800	39,071
No. 1 Annexation of 1959	9-21-59	27,126	14,303
Rainbow M. W. D.	6-10-54	167,500	37,569
No. 1 Annexation of 1959	5-12-59	24,300	12,830
No. 3 Annexation of 1967	12- 6-67	1,728,000	* 2,127,913
No. 5 Annexation of 1973	11-22-73	13,700	13,200
Rosemont M. W. D.	8-27-57	326,000	128,050
No. 1 Annexation of 1959	5-29-59	42,320	22,531
No. 2 Annexation of 1961	9-22-61	15,480	8,367
No. 3 Annexation of 1962	9-20-62	18,260	7,064
No. 4 Annexation of 1967	11-27-67	496,600	* 373,453
No. 5 Annexation of 1972	3-17-72	732,000	* 732,895
Rincon del Diablo M. W. D.	6-14-54	737,300	378,262
No. 4 Annexation of 1972	11- 2-72	18,200	* 19,882
Rio San Diego M. W. D.			
(not including Lakeside I. D.)	6- 7-56	273,980	136,600
No. 2 Annexation of 1959	11- 6-59	199,150	37,944
No. 3 Annexation of 1960	10-17-60	289,800	162,974
No. 4 Annexation of 1970	8- 3-70	364,000	* 364,328
San Diego's Irrigation District			
No. 1 Annexation of 1959	9-12-59	187,100	25,792
No. 2 Annexation of 1972	12- 8-72	197,000	* 198,189
Seven Fe Irrigation District			
South Bay Irrigation District			
(not including City of Chula Vista)	11- 3-52	449,370	133,095
Valley Center M. W. D.	5- 9-55	281,680	79,138
No. 1 Annexation of 1969	12-12-69	23,500	13,343
No. 2 Annexation of 1967	11-29-67	22,900	* 23,641
No. 3 Annexation of 1967	11-20-67	582,000	* 611,236
No. 4 Annexation of 1973	12-16-73	4,400	0
Valencia M. W. D.			
No. 1 Annexation of 1967	11-21-67	72,300	* 184,891
No. 2 Annexation of 1969	11-24-69	14,400	* 15,337
Total		\$27,633,129 (a)	\$12,248,809

* Greater than original annexation charge due to special assessment at maximum tax rate of 75¢/\$100, or less than interest on annexation charge.
(a) Figures do not total due to omission of cents.

TABLES

Table 21
WATER SALES BY METROPOLITAN WATER DISTRICT
Fiscal Years 1941-42 to 1973-74

Year	To Member Municipalities						Total
	Natural Water		Treated Water		Total to Agencies	To Others	
	Acre feet	Per cent	Acre feet	Per cent	Acre feet	Acre feet	
1941-42	0	0	9,372.6	100	9,372.6	70.7	9,443.3
1942-43	0	0	14,457.8	100	14,457.8	2,626.4	17,084.2
1943-44	0	0	15,874.9	100	15,874.9	3,301.8	19,176.7
1944-45	0	0	30,591.3	100	30,591.3	1,715.7	32,307.0
1945-46	0	0	46,685.8	100	46,685.8	1,264.2	47,950.0
1946-47	0	0	59,861.8	100	59,861.8	524.0	60,385.8
1947-48	41,093.5	36	71,995.4	64	113,088.9	116.8	113,255.7
1948-49	71,642.6	49	73,237.1	51	144,879.7	128.4	145,008.1
1949-50	69,308.0	49	72,936.0	51	142,244.0	23,371.6	165,615.6
1950-51	75,000.9	54	63,493.1	46	138,494.0	26,978.6	165,472.6
1951-52	66,674.3	44	84,616.1	56	151,290.4	42,464.2	193,754.6
1952-53	30,845.3	24	99,589.6	76	130,434.9	31,682.4	162,117.3
1953-54	120,773.0	51	115,550.6	49	236,323.6	7,820.7	244,144.3
1954-55	192,544.7	59	134,923.3	41	327,468.0	58,184.5	385,652.5
1955-56	190,337.2	53	169,506.4	47	359,843.6	45,562.9	405,406.5
1956-57	286,059.1	60	191,110.7	40	477,169.8	66,074.1	543,243.9
1957-58	266,024.1	57	197,900.0	43	463,924.1	75,612.8	539,536.9
1958-59	244,354.2	46	282,248.1	54	526,602.3	74,107.1	600,709.4
1959-60	425,019.0	58	304,874.8	42	729,893.8	3,523.2	733,417.0
1960-61	594,521.1	64	335,207.2	36	929,728.3	4,099.4	933,827.7
1961-62	608,811.0	66	312,975.9	34	921,786.9	3,676.9	925,463.8
1962-63	668,881.8	66	348,092.6	34	1,016,974.4	3,677.0	1,020,651.4
1963-64	671,853.4	63	388,553.9	37	1,060,407.3	3,776.7	1,064,184.0
1964-65	645,577.3	58	471,042.0	42	1,116,619.3	5,035.3	1,121,654.6
1965-66	550,630.8	52	503,424.9	48	1,054,055.7	4,821.8	1,058,877.5
1966-67	523,141.2	50	531,659.7	50	1,054,800.9	4,513.0	1,059,313.9
1967-68	514,248.1	48	557,730.9	52	1,071,979.0	4,934.9	1,076,913.9
1968-69	455,174.3	43	599,237.7	57	1,054,412.0	2,232.4	1,056,644.4
1969-70	482,256.9	41	682,866.4	59	1,165,103.3	650.0	1,165,753.3
1970-71	520,983.9	46	612,511.6	54	1,133,495.5	150.3	1,133,645.8
1971-72	590,356.9	47	656,635.9	53	1,246,992.8	549.6	1,247,542.4
1972-73	569,290.7	48	606,120.4	52	1,175,411.1	4.3	1,175,415.4
1973-74	655,057.2	52	593,177.8	48	1,248,235.0	954.2	1,249,189.2

Table 22
WATER PRODUCTION - METROPOLITAN WATER DISTRICT CONSTITUENT AREAS
Figures Furnished by Metropolitan Water District

Constituent Areas	Total Water Production			Source of Water Produced - 1973-74		
	1972-73	1973-74	Percent Increase or Decrease	M. W. D.		Other
	Amount ac. ft.	Amount ac. ft.		Amount ac. ft.	Percent of Total	
Anabsein	38,790	41,488	7	4,485	11	37,003b
Beverly Hills	14,606	14,166	-3	9,915	70	4,251
Barbanc	24,601	24,893	1	10,267	41	14,626
Calligaus M. W. D.	73,407	71,345	-3	40,710	57	30,638
Central Basin M. W. D.	216,945	215,321	-1	62,660*	29	152,721
Chino Basin M. W. D.	173,593	172,588	-1	7,588*	4	165,000
Coastal M. W. D.	36,379	41,049	13	40,100	98	949
Compton	9,437	9,177	-3	3,953	43	5,224
Eastern M. W. D.	116,879	132,233	13	39,674	30	92,559a
Foot Hill M. W. D.	15,147	13,082	0	7,567	50	7,515
Fullerton	25,629	27,417	7	14,061	51	13,356
Glendale	23,473	21,516	-8	8,198	38	13,320
Las Virgenes M. W. D.	10,829	8,785	-20	8,341	95	454
Long Beach	72,262	70,393	-3	40,384	57	30,009
Los Angeles	572,328	564,704	-1	25,477	5	539,227
Orange County M. W. D.	249,638	266,960	7	110,573*c	41	155,987
Pasadena	33,355	33,755	1	17,125	51	16,630
Pomona Valley M. W. D.	80,964	75,842	-6	18,559	24	57,283
San Diego C. W. A.	375,123	371,639	-1	327,642	88	43,997
San Marino	4,625	4,742	3	0	0	4,742
Santa Ana	30,764	33,071	7	15,209	46	17,862
Santa Monica	17,715	17,329	-3	9,965	57	7,324
Torrance	24,188	22,864	-5	18,348	80	4,516
Upper San Gabriel Valley						
M. W. D.	189,590	235,622	24	184*	0	235,438
West Basin M. W. D.	174,834	169,395	-3	125,285*	74	44,110
Western M. W. D.	211,552	224,293	6	35,393*	16	188,900
San Fernando	3,125	3,081	-2	166	3	2,975
Totals	2,519,897	2,585,265	2	1,001,649	35	1,866,616

NOTES: (a) Includes 5,110 acre-feet of seepage into San Jacinto Tunnel.
 (b) Does not include deliveries by M. W. D. of Orange County.
 (c) Does not include 13,335 acre-feet delivered by Coastal M. W. D.
 * Does not include water delivered for replenishment purposes.

San Diego County Water Authority
 ANNUAL FINANCIAL REPORT
 YEAR ENDED JUNE 30, 1974

PEAT, MARWICK, MITCHELL & Co.

CERTIFIED PUBLIC ACCOUNTANTS

8500 FIFTH AVENUE

SAN DIEGO, CALIFORNIA 92101

The Board of Directors
San Diego County Water Authority:

We have examined the balance sheets of the San Diego County Water Authority as of June 30, 1974 and 1973, and the related statements of income and expenses, changes in financial position and changes in equity and fund balances for the years then ended. Our examination was made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the aforementioned financial statements present fairly the financial position of the San Diego County Water Authority at June 30, 1974 and 1973, and the results of its operations and changes in financial position for the years then ended, in conformity with generally accepted accounting principles applied on a consistent basis. Supplementary data included in Schedules 1 and 2 have been subjected to the same auditing procedures and, in our opinion, are stated fairly in all material respects when considered in conjunction with the basic financial statements taken as a whole.

Peat, Marwick, Mitchell & Co.

August 23, 1974

SAN DIEGO COUNTY WATER AUTHORITY

FINANCIAL REPORT

Exhibit A

SAN DIEGO COUNTY WATER AUTHORITY

Balance Sheets

June 30, 1974 and 1973

<u>Assets</u>	1974	1973
General fund:		
Current assets:		
Cash (including certificates of deposit)	\$ 4,848,796	4,132,170
Investments	-	212,000
Accounts receivable	2,273,496	2,298,110
Current installments of long-term receivables (note 2)	74,298	95,851
Inventory of water in storage	1,188,825	1,129,930
Prepaid expenses	10,012	8,252
Total current assets - general fund	<u>8,395,427</u>	<u>7,876,320</u>
Long-term receivables, excluding current installments (note 2)	29,003	113,422
Total general fund	<u>8,424,430</u>	<u>7,989,742</u>
Special funds:		
Debt service reserve funds:		
Cash (including certificates of deposit)	899,254	894,445
Investments	-	5,000
Interest receivable	746	555
Waterworks bonds, debt service funds:		
Cash (including certificates of deposit)	308,744	44,042
Deposit with fiscal agent	48,041	37,454
Investments	-	25,000
Interest receivable	2,003	56
U.S. Government contract fund:		
Cash (including certificates of deposit)	38,740	18,946
Interest receivable	787	19
Due from Metropolitan Water District (note 5)	5,152,201	5,609,004
Waterworks bonds, improvement funds:		
Cash (including certificates of deposit)	984,271	1,510,950
Investments	-	8,000
Accounts receivable	7,695	1,091,282
Trust and agency fund (note 3):		
Cash	-	4,184
Total special funds	<u>7,642,482</u>	<u>9,248,937</u>
Property, plant, equipment and participation rights, net (note 4)	182,191,013	176,081,751
	<u>\$ 198,057,925</u>	<u>193,300,430</u>

See accompanying notes to financial statements.

Liabilities, Reserves, Equity and Fund Balances

1974

1973

General fund:		
Current liabilities:		
Accounts payable	\$ 3,659,781	3,596,960
Advances and deposits by agencies	37,634	46,054
Total current liabilities - general fund	<u>3,697,415</u>	<u>3,643,014</u>
Special funds:		
Current liabilities:		
Current installments of long-term debt (note 5)	2,229,029	2,149,029
Matured bond principal and interest payable	48,041	37,454
Accounts payable	3,267	1,071,520
Trust and agency fund balance (note 3)	-	4,184
Total current liabilities - special funds	<u>2,280,337</u>	<u>3,262,187</u>
Total current liabilities	<u>5,977,752</u>	<u>6,905,201</u>
Long-term debt, excluding current installments (note 5):		
General obligation bonds payable	56,160,000	57,510,000
U.S. Government contracts	8,707,940	9,586,969
Annexation charges - Metropolitan Water District	12,248,900	12,877,538
Total long-term debt	<u>77,116,840</u>	<u>79,974,507</u>
Reserve for notes receivable (note 2)	66,902	159,375
Equity and fund balances:		
Equity in property, plant, equipment and participation rights (note 4)	103,833,844	95,496,927
Restricted balances:		
Waterworks bonds, debt service fund	310,747	69,098
U.S. Government contract fund	5,191,727	5,627,969
Appropriated funds:		
Debt service reserve funds	900,000	900,000
General fund	26,897	291,690
Unappropriated general fund balance	4,633,216	3,895,663
Total equity and fund balances	<u>114,896,431</u>	<u>106,281,347</u>
Commitment (note 6)		
	<u>\$ 198,057,925</u>	<u>193,300,430</u>

SAN DIEGO COUNTY WATER AUTHORITY

FINANCIAL REPORT

Exhibit C

Exhibit B

SAN DIEGO COUNTY WATER AUTHORITY
Statements of Income and Expenses
Years ended June 30, 1974 and 1973

	1974	1973
Operating income:		
Water sales	\$ 16,135,103	16,098,004
Cost of sales:		
Water in storage at beginning of year	1,129,930	1,236,389
Water purchased	15,713,900	15,527,992
Water in storage at end of year	16,843,830	16,764,381
	1,188,825	1,129,930
Cost of sales	15,655,005	15,638,451
Gross margin from sale of water	480,098	463,553
Water delivery fees (note 3)	146,430	88,917
Total operating income	626,528	552,470
Operating expense	629,495	534,149
Net operating income (loss) before depreciation	(2,967)	18,321
Depreciation expense	821,727	714,128
Net loss from operations	(824,694)	(695,807)
Nonoperating income:		
Property taxes	4,513,103	3,974,515
Interest	738,076	726,384
Other	72,308	95,752
Total nonoperating income	5,323,487	4,796,651
Nonoperating expense - interest	4,498,793	4,100,844
Net income	2,704,235	2,771,936
Provision for depreciation, an expense which did not require a current cash outlay	821,727	714,128
Net income before depreciation	\$ 2,616,285	2,043,036

See accompanying notes to financial statements.

SAN DIEGO COUNTY WATER AUTHORITY
Statements of Changes in Financial Position
Years ended June 30, 1974 and 1973

	1974	1973
Funds provided:		
Operations:		
Water sales and other operating income, except property taxes, including earnings on investments of \$738,076 in 1974 and \$726,384 in 1973	\$ 17,091,917	17,009,057
Property tax revenue	4,513,103	3,974,515
Total	21,605,020	20,983,572
Less cost of water, operating and other expenses, including interest on bonded debt of \$2,704,235 in 1974 and \$2,771,936 in 1973	19,810,462	19,654,664
Net income	1,794,558	1,328,908
Add back depreciation charged as expense but not requiring a cash outlay	821,727	714,128
Total funds provided by operations	2,616,285	2,043,036
Additions to equity and fund balances, other than income:		
Direct payments by member agencies to Metropolitan Water District	6,756,013	6,179,556
Contributions by member agencies for property, plant and equipment	61,913	118,510
Annexation charges	2,600	10,200
Decrease in net assets of waterworks bonds, improvement funds, applied to new construction	550,013	6,780,696
Special fund balances applied to debt service:		
Waterworks bonds, debt service funds	-	228,703
U.S. Government Contract Fund	436,242	446,163
Other	-	1,439
	\$ 10,423,066	15,808,283
Funds used:		
Long-term debt maturities	2,777,667	2,400,923
Capital expenditures, net	6,930,989	12,994,588
Increase in waterworks bonds, debt service funds equities, in excess of amounts applied to debt service	241,649	-
Other	8,055	-
Increase in general fund working capital	464,706	412,772
	\$ 10,423,066	15,808,283
Changes in general fund working capital:		
Increase (decrease) in current assets:		
Cash	716,626	116,040
Investments	(212,000)	212,000
Accounts receivable	(24,614)	625,974
Current installments of long-term receivables	(21,553)	(16,600)
Inventory of water in storage	58,895	(106,459)
Prepaid expenses	1,753	(947)
	519,107	829,608
Decrease (increase) in current liabilities:		
Accounts payable	62,821	388,994
Deposits and advances by agencies	(8,420)	27,842
	54,401	416,836
Increase in general fund working capital	\$ 464,706	412,772

See accompanying notes to financial statements.

SAN DIEGO COUNTY WATER AUTHORITY
Statements of Changes in Equity and Fund Balances
Years ended June 30, 1974 and 1973

	Total	General
Balances, July 1, 1972	\$ 98,644,173	3,776,001
Additions (deductions):		
Net income before depreciation	2,043,036	409,417
Provision for depreciation	(714,128)	-
Taxes and direct payments by member agencies to Metropolitan Water District	6,179,556	-
Expenditures for property, plant and equipment:		
From general fund	-	(33,753)
From advances by member agencies	118,510	-
Increase in annexation charges	10,200	10,200
Waterworks bonds redeemed	-	-
Payments on U.S. Government contracts	-	-
Interfund transfers	-	25,488
Balances, June 30, 1973	<u>106,281,347</u>	<u>4,187,353</u>
Additions (deductions):		
Net income before depreciation	2,616,285	528,993
Provision for depreciation	(821,727)	-
Taxes and direct payments by member agencies to Metropolitan Water District	6,756,013	-
Expenditures for property, plant and equipment:		
From general fund	-	(93,226)
From advances by member agencies	61,913	-
Increase in annexation charges	2,600	2,600
Waterworks bonds redeemed	-	-
Payments on U.S. Government contracts	-	-
Interfund transfers	-	34,393
Balances, June 30, 1974	<u>\$ 114,896,431</u>	<u>4,660,113</u>

	Debt service	Waterworks debt service	U.S. Government contract	Equipment plant, equipment and participation rights
Balances, July 1, 1972	900,000	297,801	6,074,132	87,596,239
Additions (deductions):				
Net income before depreciation	25,488	961,297	432,867	213,967
Provision for depreciation	-	-	-	(714,128)
Taxes and direct payments by member agencies to Metropolitan Water District	-	-	-	6,179,556
Expenditures for property, plant and equipment:				
From general fund	-	-	-	33,753
From advances by member agencies	-	-	-	118,510
Increase in annexation charges	-	-	-	-
Waterworks bonds redeemed	-	(1,190,000)	-	1,190,000
Payments on U.S. Government contracts	-	-	(879,030)	879,030
Interfund transfers	(25,488)	-	-	-
Balances, June 30, 1973	<u>900,000</u>	<u>69,098</u>	<u>5,627,969</u>	<u>95,496,927</u>
Additions (deductions):				
Net income before depreciation	34,393	1,511,649	442,787	98,463
Provision for depreciation	-	-	-	(821,727)
Taxes and direct payments by member agencies to Metropolitan Water District	-	-	-	6,756,013
Expenditures for property, plant and equipment:				
From general fund	-	-	-	93,226
From advances by member agencies	-	-	-	61,913
Increase in annexation charges	-	-	-	-
Waterworks bonds redeemed	-	(1,270,000)	-	1,270,000
Payments on U.S. Government contracts	-	-	(879,029)	879,029
Interfund transfers	(34,393)	-	-	-
Balances, June 30, 1974	<u>900,000</u>	<u>310,747</u>	<u>5,191,727</u>	<u>103,833,844</u>

See accompanying notes to financial statements.

SAN DIEGO COUNTY WATER AUTHORITY

SAN DIEGO COUNTY WATER AUTHORITY

Notes to Financial Statements

June 30, 1974 and 1973

(1) Summary of Accounting Policies

Accounting Methods:

The financial statements of the Authority are prepared from accounting records kept on a modified accrual basis. In general, income is recorded when earned and expenses are recorded upon incurrence of liability, except accrued interest on outstanding indebtedness, which is payable from appropriations of the following year. If accrued interest were recorded, the net income for the year would have been increased by approximately \$30,000 and the total of equity and fund balances at June 30, 1974 would have been reduced by approximately \$792,000.

Taxes Receivable:

Uncollected taxes are fully reserved and are not included in the accompanying financial statements.

The analysis of taxes receivable by fund is as follows:

	1974	1973
General fund	\$ 2,769	2,324
Waterworks bonds, debt service funds	106,306	84,852
U.S. Government contract fund	16,428	14,410
Total taxes receivable	\$ 125,503	101,586

Inventory of Water in Storage:

The inventory of water in storage is recorded at cost (first-in, first-out).

Property, Plant, Equipment and Participation Rights:

Property, plant and equipment and participation rights are recorded at cost. Depreciation is computed on the straight-line method over the estimated lives of the respective items.

Annexation charges due The Metropolitan Water District and interest thereon are paid by special taxes levied on the properties within the annexed areas. The liability, \$12,248,900 and \$12,877,538 at June 30, 1974 and 1973, respectively, and the corresponding cost of participation rights in The Metropolitan Water District are reflected on the Authority's records. The net reduction in annexation charges payable is reflected only as an increase in the Authority's equity in plant, equipment and participation rights along with other taxes and direct payments by member agencies to Metropolitan Water District.

FINANCIAL REPORT

SAN DIEGO COUNTY WATER AUTHORITY

Notes to Financial Statements, Continued

(2) Long-Term Receivables

Description	Interest rate	1974	1973
Undivided interest in notes received in settlement of judgment	5%	\$ 66,902	159,375
Annexation charges due from special districts		36,399	49,828
Total long-term receivables		103,301	209,273
Less current installments of long-term receivables		74,298	95,851
Long-term receivables, excluding current installments		\$ 29,003	113,422

The Authority does not recognize income related to the notes receivable until actual collections are received. Consequently, a reserve has been established amounting to \$66,902 and \$159,375 at June 30, 1974 and 1973, respectively.

(3) Trust and Agency Fund

The Authority is a party to an agreement with several governmental agencies for the temporary delivery of Mexican treaty waters of the Colorado River to the international boundary. The agreement, in part, provides for the Authority to:

- a) Receive and disburse advances for the estimated costs during construction.
- b) Collect and disburse service charges relative to the delivery of water.

An analysis of construction advances follows:

	1974	1973
Balance, beginning of year	\$ 4,184	365,582
Expended for construction	4,184	361,398
Balance, end of year	\$ -	4,184

Amounts billed by the Authority for service charges for water delivery are collected and, in part, distributed to the respective agencies providing the agreed services. The Authority's share of these charges are reported on Exhibit B as water delivery fees.

SAN DIEGO COUNTY WATER AUTHORITY

SAN DIEGO COUNTY WATER AUTHORITY

Notes to Financial Statements, Continued

(4) Property, Plant, Equipment and Participation Rights and Equity in Property, Plant, Equipment and Participation Rights

	<u>1974</u>	<u>1973</u>
Property, plant, equipment and participation rights:		
Property, plant and equipment	\$ 80,064,326	66,364,619
Less accumulated depreciation	<u>9,990,449</u>	<u>9,172,789</u>
Net property, plant and equipment	70,073,877	57,191,830
Construction work in progress	13,433,400	26,333,559
Participation rights in Metropolitan Water District	<u>98,683,736</u>	<u>92,556,362</u>
Net property, plant, equipment and participation rights	182,191,013	176,081,751
Less total long-term debt	<u>79,345,869</u>	<u>82,123,536</u>
	102,845,144	93,958,215
Add:		
Construction capital projects - waterworks bonds, improvement funds, net of construction accounts payable (subject to encumbrances of \$175,479 in 1973)	<u>988,700</u>	<u>1,538,712</u>
Equity in property, plant, equipment and participation rights	<u>\$ 103,833,844</u>	<u>95,496,927</u>
The property, plant and equipment was financed by:		
General obligation bonds	54,985,094	43,084,266
U.S. Government contract	14,873,407	14,873,407
Current revenues	9,279,942	7,559,753
Agencies contributions	<u>925,883</u>	<u>847,193</u>
Total property, plant and equipment	<u>\$ 80,064,326</u>	<u>66,364,619</u>

FINANCIAL REPORT

SAN DIEGO COUNTY WATER AUTHORITY

Notes to Financial Statements, Continued

(5) Long-Term Debt

Description	Interest rate	<u>1974</u>	<u>1973</u>
General obligation bonds:			
Waterworks bonds, 1957, maturing February 1, 1975 - 1994	1 1/2% - 6%	\$ 29,525,000	30,355,000
Waterworks bonds, 1966, maturing October 1, 1974 - 2004	4-1/2% - 5-1/2%	<u>27,985,000</u>	<u>28,425,000</u>
Total bonds		57,510,000	58,780,000
U.S. Government contract:			
Authority's share:			
First pipeline	-	861,049	1,111,049
Second pipeline	2.599%	<u>3,573,718</u>	<u>3,745,945</u>
		4,434,767	4,856,994
Metropolitan Water District's share:			
First pipeline	-	861,049	1,111,049
Second pipeline	2.599%	<u>4,291,153</u>	<u>4,497,955</u>
		5,152,202	5,609,004
Total U.S. contract		<u>9,586,969</u>	<u>10,465,998</u>
Annexation charges - Metropolitan Water District		12,248,900	12,877,538
Total long-term debt		79,345,869	82,123,536
Less current installments of long-term debt		<u>2,229,029</u>	<u>2,149,029</u>
Long-term debt, excluding current installments		<u>\$ 77,116,840</u>	<u>79,974,507</u>

The Metropolitan Water District's indebtedness to the Authority represents the balance of the District's share of the cost of the first and second pipelines of the first San Diego aqueduct.

(6) Pension Plan

The Authority is a member of the California Public Employee's Retirement System which provides retirement benefits for all of its permanent employees. The total pension expense was \$37,149 in 1974 and \$39,717 in 1973, which included amortization of prior service benefits to June 30, 1980 and supplemental benefits to May 30, 1983. The Authority's policy is to fund accrued pension costs. There are no unfunded vested benefits.

SAN DIEGO COUNTY WATER AUTHORITY

Schedule 1

SAN DIEGO COUNTY WATER AUTHORITY
 Operating Expense
 Years ended June 30, 1974 and 1973

	1974	1973
Water treatment	\$ 95,121	98,708
Systems operations	73,851	73,986
Maintenance of structures and plant	119,881	116,884
Administrative and general salaries	138,520	122,862
General expense and supplies	252,868	177,558
Automotive operation, maintenance and shop expense	<u>43,069</u>	<u>40,117</u>
Grand total	723,310	630,115
Less portion charged to property, equipment and other	<u>93,815</u>	<u>95,966</u>
Total operating expense	\$ <u>629,495</u>	<u>534,149</u>

FINANCIAL REPORT

Schedule 2

SAN DIEGO COUNTY WATER AUTHORITY
 Bonded Debt Maturities
 June 30, 1974

Year ended June 30,	Waterworks Bonds		Total principal	Total interest	Total
	1957 Principal	1966 Principal			
1975	\$ 890,000	460,000	1,350,000	2,435,840	3,785,840
1976	970,000	480,000	1,450,000	2,375,190	3,825,190
1977	1,070,000	500,000	1,570,000	2,310,215	3,880,215
1978	1,140,000	525,000	1,665,000	2,239,952	3,904,952
1979	1,195,000	545,000	1,740,000	2,165,437	3,905,437
1980	1,260,000	570,000	1,830,000	2,087,250	3,917,250
1981	1,330,000	595,000	1,925,000	2,009,917	3,934,917
1982	1,400,000	625,000	2,025,000	1,931,967	3,956,967
1983	1,470,000	650,000	2,120,000	1,852,260	3,972,260
1984	1,540,000	680,000	2,220,000	1,767,890	3,987,890
1985	1,620,000	710,000	2,330,000	1,678,707	4,008,707
1986	1,680,000	745,000	2,425,000	1,584,486	4,009,486
1987	1,740,000	775,000	2,515,000	1,486,521	4,001,521
1988	1,815,000	815,000	2,630,000	1,384,475	4,014,475
1989	1,880,000	850,000	2,730,000	1,277,868	4,007,868
1990	1,960,000	890,000	2,850,000	1,166,815	4,016,815
1991	2,040,000	925,000	2,965,000	1,051,020	4,016,020
1992	2,100,000	970,000	3,070,000	930,117	4,000,117
1993	2,165,000	1,015,000	3,180,000	804,537	3,984,537
1994	260,000	1,060,000	1,320,000	694,630	2,014,630
1995	-	1,105,000	1,105,000	632,747	1,737,747
1996	-	1,155,000	1,155,000	577,377	1,732,377
1997	-	1,210,000	1,210,000	519,435	1,729,435
1998	-	1,265,000	1,265,000	458,797	1,723,797
1999	-	1,320,000	1,320,000	395,465	1,715,465
2000	-	1,380,000	1,380,000	329,315	1,709,315
2001	-	1,440,000	1,440,000	260,225	1,700,225
2002	-	1,505,000	1,505,000	188,072	1,693,072
2003	-	1,575,000	1,575,000	112,612	1,687,612
2004	-	1,645,000	1,645,000	37,012	1,682,012
	\$ 29,525,000	27,985,000	57,510,000	26,746,151	84,256,151